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BATTLE OF MANILA

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COMMON REFERENCE: Assault on the City of Manila.

TYPE OPERATION: Offensive, Deliberate Attack, MOUT.

OPPOSING FORCES: US: 37th Inf Div
1st Cav Div
11 Inf Div

Japan: Approximately 14,000
Manila Naval Defense
Force
-- Manila Sector
1st, 2d, 3d, 4th BN
Independent Bn
-- Cavite Sector--5th Bn
South Flank Detachment
Assorted Signal,
maintenance, medical
and Transportation
units

SYNOPSIS: The main purpose of the enemy in defending Manila was threefold; to effect maximum attrition of US forces, to delay the occupation and use of the Port of Manila as long as possible, and to cripple the city as a base for future military operations and as a center for civilian production and government control. There was no effort to evacuate the civilian populace. Enemy strongpoints with heavy anti-armor weapons were established behind barricades, in buildings by uncoordinated groups. Instructions for the enemy were to fight until death. Excellent operation to assess the value of espionage and counter-espionage, chemical warfare and use of armor in a built-up area. Offensive techniques such as the use of flame throwers, night operations and observation posts, methods of assault and deployment techniques can be analyzed.



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BATTLE OF MANILA
OFFENSIVE, DELIBERATE ATTACK, MOUT
CONDUCTED BY: THE SIXTH AND EIGHTH U.S. ARMIES
JANUARY TO FEBRUARY 1945

Prepared by:
Staff Group B, Section 13
MAJ Buddy Buck

COL Anselmo Avenido	MAJ Gary Richardson
MAJ John Benedict	MAJ Pete Rodda
MAJ Norm Benninghoff	MAJ Pete Verga
MAJ Dick Demers	MAJ Bill Whiteley
MAJ Jim Groce	MAJ Bob Wiese
MAJ Jim Harpole	MAJ Skip Wigner
LTC Mike Kussman	LTC Yoshihiro Yamaguchi

Submitted to the Combat Studies Institute
U.S. Army Command and General Staff College

In Partial Fulfillment of
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Battle Analysis

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SECTION I

"Introduction to the Battle of Manila."

The Battle of Manila should not be viewed in isolation as it was only one episode in the liberation of the Philippines. For the purpose of this analysis, the battle begins 31 January 1945 with US forces making an initial dash toward Manila. Following is a brief synopsis of the events immediately prior to the battle that will provide some appreciation for the events that lead to this clash of arms.

As early as 15 December 1944, the Allies conducted small landings on Mindoro Island to secure an airfield. This operation was conducted to provide air support for subsequent larger amphibious operations. The 8th US Army was tasked to conduct several demonstrations along the Mindoro coast in an attempt to deceive the enemy as to the actual landing sites. These deception operations were unsuccessful. General Yamashita, the Japanese area commander, was expecting the US invasion to be launched on the Lingayen Gulf. In anticipation of this invasion, the Japanese had divided their forces on the island of Luzon into three groups. The Shobu Group was arrayed in the north and was tasked to defend against the landing, and then withdraw into the rugged mountains north of Dagui. The Kembu Group was tasked to defend Clark Airfield and then withdraw eastward into the mountains. The southern group, the Shimbu, was responsible for all of southern Luzon. The Shimbu forces were concentrated in the mountains east and south of Manila. General Yamashita's intent was not to contest the city itself. On 9 January 1945, the 6th US Army landed at Lingayen Gulf with the mission to consolidate a beachhead, establish air and land base facilities, secure the central plain, and capture the city of Manila. With the exception of stiff resistance in the Cabaruan Hills and around Clark Field, the operation went well. General MacArthur was very anxious to achieve the political advantage of securing the capitol and urged a rapid advance to Manila. This brings us to the 31st of January and the eve of the battle.

The sources consulted by the staff group are listed in the bibliography. In addition to these publications, we were very fortunate to have had access to both Philippine and Japanese records of the battle, provided by Allied students. We feel that these untapped resources have added depth and objectivity to the analysis of this battle.

The primary sources used by this staff group for the study of the battle of Manila consisted of unit histories and after-action reports prepared by the principal units involved.

The secondary sources, including the official Japanese history of the action (in Japanese text) and the official Army histories were well written and provided much information about the battle. These histories are written from differing viewpoints but contained little contradictory information. However, the Japanese history was the only source available from the Japanese perspective. The US official history does use the past war interviews with senior Japanese officers as a source of information. There was no information available from the Philippine guerilla forces or civil authorities. This absence of information may have resulted in a lack of emphasis on what may have been a critical component of the battle. A synopsis of the major sources used follows:

(1) The book, Road to Tokyo. 1st Cavalry Division in WW II, was a division historian's compilation of the battles of World War II. The Luzon Campaign was explained in detail. However, the book is laced with names of those soldiers awarded the various medals for their action during the battle. This seriously detracts from the actual flow of the campaign. The book contains adequate maps and photographs to depict the various battles and significant events. The writer's point of view was obviously one sided and the acknowledgement asserts that the book was prepared to pay tribute to the men of the 1st Cavalry Division. The author states that he used other publications and after action reports to prepare the book.

There is no reference made to the author using enemy documents or personal interviews with enemy soldiers to obtain the enemy's point of view during the Luzon Campaign.

(2) Volumes I and II (Parts 1 and 2) of Reports of General MacArthur were compiled from the Japanese Demobilization Bureau Records at General MacArthur's Tokyo headquarters in 1950.

These volumes were written by MacArthur's staff after the war. They provide detailed accounts of the various operations. Volume II represents the contributions of Japanese officers employed to tell their story of the operations against MacArthur's forces. Records and maps are utilized throughout as are footnotes, pictures and other references to tell the Japanese side. The volumes go into much detail explaining the movement of both enemy and friendly units. Specific commanders, both enemy and

friendly, are mentioned and referenced throughout the books, lending significant authenticity to the writings. Detailed maps in both English and Japanese are pictured to assist the readers in following the progress of the action.

(3) The book, Luzon Campaign, 9 Jan-30 Jun 1945, by the Sixth Army is an after-action report of the battles on Luzon. The Battle of Manila is detailed in these volumes. With pictures and maps, the reader was able to trace the action from the planning phase through execution. It is written from the Sixth Army perspective but goes into great detail about the operations and problems encountered. It contains little information from an enemy's viewpoint and is seriously lacking in this area. There were few maps available in these volumes which made it difficult to trace the battle.

(4) From Down Under to Nippon, ^{Author?} provides good details and description about the battle with sufficient maps to describe the action. Again, the book is written from a commander's point of view with little enemy input.

(5) The War with Japan, (Parts 1, 2, and 3) compiled by the US Military Academy provides detailed accounts of the Battle for Manila with elaborate maps, illustrating the advance on the city and the subsequent conquest of Manila.

SECTION II

"The Strategic Setting."

In January 1945, the Allies were increasingly triumphant on all fronts. The war in Europe was rapidly coming to a close as the German's ability to sustain war began to collapse. The Japanese continued to offer stubborn resistance in the Pacific, but their area of influence was steadily being reduced closer to their homeland.

Before considering the battle of Manila in detail, it is only appropriate to review the basic reason for the Allied decision to reconquer the island. The Japanese had abruptly ended the U.S. occupation of the islands in 1942, and this blow to the American ego weighed heavily on General MacArthur. It is well known that he staked his personal reputation and popularity with the Philippine people on his promise to liberate the islands. There were several other alternatives to fighting a major campaign in the Philippines; especially fighting in the city of Manila. Each of these would have maintained effective pressure on the Japanese. General MacArthur's influence must be considered to be the primary factor that consistently drove the U.S. forces back to the Philippines. As Commander-in-Chief of the Southwest Pacific area, General Douglas MacArthur planned and executed a massive campaign to reconquer the islands. Ranking high on the list of allied objectives was the recapture of the city of Manila. Manila was the capital city and key to controlling the extensive military installations in the area.

Japan had occupied the Philippines for the past three years and was committed to maintain her hold on the island. Opposing the Japanese were both the Allied (but principally US) forces who would mount the invasion and a well organized Philippine guerilla force that would increasingly hinder Japanese efforts to maneuver in response to the allied landings.

The Japanese forces in the Philippines were progressively being isolated from their home base of supply by the familiar formula of a massive air superiority campaign, coupled with thorough interdiction of the sea lines of communication to Japan. General MacArthur's forces had been using this technique throughout their island hopping campaigns. These tactics not only indicated a desire to isolate the enemy and deliver an overwhelming mass attack, but also minimized allied casualties as much as possible. The United States domestic political situation was making the latter consideration increasingly important.

Although both the Japanese and Allied forces would experience their own brand of organizational disfunction, the overwhelming firepower, tactical maneuverability, and logistical support available to the Allies ultimately proved crucial to the outcome of the battle. Active and passive Philippine

participation in the battle denied the Japanese a base of supply and continually threatened their freedom of maneuver. Philippino guerilla assistance to the advancing Americans is not well documented but was certainly much more crucial than the major unit after-action reports would indicate.

In many ways, the Battle of Manila was a product of the fog and confusion of war. General Yamashita, the overall Japanese ground commander, had ordered the evacuation of the city. For a variety of reasons, the order was not executed and a Japanese composite force, consisting largely of naval personnel, remained to defend Manila. The remaining force was under the loose command of Admiral Iwabuchi. In retrospect, the battle was a futile Japanese effort and contributed little to the overall Japanese plan to mount a major delaying action against the Allied forces. Ultimately, the Japanese defense of the city resulted in pointless loss of life and property, both military and civilian.

SECTION III

"The Tactical Situation."

The most significant feature in the area of operations was the city of Manila. In 1945, the area of the city included 14.5 square miles. The city area included 5.5 miles of shoreline along the eastern edge of Manila Bay and extended 4 miles inland at its deepest point. Manila's population of 800,000 people combined with Greater Manila, totalled some 1,100,000. The Pasig River flows westward into the Manila Bay dissecting the city into a northern and southern section. The business district was located north of the Pasig River and the densely populated Tondo district stretched along the bay front.

The southern portion of the city contained the great Spanish walled city, Intramuros, which would serve as the Japanese main defense and last stronghold (see Appendix 1). The southern portion of the city included many hospitals, government buildings, schools, apartment houses and parks. Considerable industrial development could be found along the southern bank.

The construction of the buildings within the city was quite varied. The Tondo District's flimsy houses were highly flammable; while other residences north of the Pasig River were either frame, or a combination of stone and brick. The business district buildings were built with reinforced concrete. However, the sturdiest structures, were government buildings located in the southern portion. These were able to withstand the frequent earthquakes common throughout the region. The outer walls of the Intramuros were up to forty feet thick at the base, reaching a height of twenty-five feet, and ten feet thick at its summit. The walls were constructed of huge stone blocks with the interior buildings also made of stone.

Weather information reveals that due to its geographical location, Manila receives only 5.9 inches of rainfall during dry seasons, which extend from December to April. During February, the month of the battle, Manila has only an average of .6 inches of rainfall. Temperatures range from 77 to 84 degrees with February's temperature averaging 79 degrees. (1) Weather data was taken from general information about Philippines' geography. None of the military records and sources consulted addressed weather or climate as being a factor during the battle. Intelligence estimates and annexes did reference weather appendices; however, these appendices are missing. Thus, the exact climate that existed during the battle could not be

determined. Only passing references to periodic showers in the area indicated some problems with mud. One reference cited the heat: "Heat, fanatic Japanese resistance, and the necessity for attacking up open, steep slopes had taken a heavy toll." (2)

The battle for the city of Manila was characteristic of the problems and nightmares associated with urban warfare. Cities are formidable objectives to any military force and Manila was no exception. In general, observation and fields of fire were extremely limited. Fields of fire extended for only several blocks, and were encumbered by buildings or twists in the roads. Observation was severely restricted. High buildings were used as the principal means to control troop advances, direct artillery strikes and gather first-hand information about enemy positions. The 37th Infantry Division reported: "The Division OP operated by the G-2, located in the Great Eastern Hotel building north of the Pasig proved to be of great value in observing enemy activity. Considerable activity was observed in the General Post Office, Metropolitan Theater, Fort Santiago and Intramuros. . . . Many enemy artillery and AA positions were observed in the Intramuros, and the Port District and were taken under Blue artillery fire." (3) (See Appendix 1) Those areas that did offer good observation and fields of fire were initially in the hands of the Japanese. These areas were turned into formidable strongpoints that would take days to capture and clear. Rizal Stadium, located south of the city, was such an area. The stadium was a complex of four main athletic fields with a large cement stadium. Open fields bordered Rizal Stadium on the north and west providing excellent fields of fire. Elements of the 1st Cavalry Division spent three days securing the stadium for the high price of 40 dead and 315 wounded. (4)

Cover and concealment were available throughout the city for both US and Japanese forces. The Japanese used buildings and barricades extensively for protection and concealment. Repeatedly, Japanese forces remained inside buildings throughout the shelling using the rubble for protection. The Japanese defense centered around the use of reinforced buildings throughout the city as major strongholds. "The enemy made good use of all types of cover provided by buildings and as a rule could not be driven out of the positions except by extermination." (5) Initially, cover and concealment benefited the Japanese. However, as buildings were slowly cleared, and the US forces isolated enemy units from each other, the positions proved to be detrimental to the defenders, because they allowed no escape.

The Japanese not only made good use of cover, but they also made extensive and excellent use of obstacles. Manila was by itself a formidable obstacle and the Japanese made it even more formidable. Prior to the war, Manila's streets were well paved.

However, at the time of battle, many streets had been chewed up due to heavy military traffic. North of the Pasig, many streets were narrow and not much better than alleys. Streets traversed in all directions from central plaza points, crossed each other at various angles and often ended abruptly. In the southern sector, the streets tended to be wider, generally set at right angles to each other. (6) Extensive use of minefields throughout the city, both controlled and uncontrolled, blocked roads, bridges, buildings and areas around barricades. Improvised mines were common, using unexploded naval and artillery shells. Road blocks and barricades interspersed with minefields were a part of all key intersections. Some barricades merely consisted of turned over cars or the rubble of bombed out buildings. Large factory machines were pulled into the streets as effective road blocks. Other barricades consisted of "steel rails embedded in the ground and standing 6 to 8 feet high, irregularly spaced 2 to 3 feet apart with barbed wire strung between." (7) During the battle period, fifty barriers of all types were removed by US forces, many covered by automatic and anti-tank weapons. (8)

Another obstacle encountered by US forces was a local population overjoyed to see them. "Among the obstacles encountered by the Division's advance in Manila was the presence of swarms of the native population who crowded the streets cheering the American troops, forcing gifts upon them, and as the conflagration roared into the business district, engaged in unrestrained looting." (9) Fires set by the Japanese in the northern sector of the city, quickly spread to the Tondo District. The smoke and flames engulfing the buildings slowed down the advance of the 37th Infantry for two days, fighting the blaze in an attempt to save some of the residential areas.

Almost every major building in Manila became a strongpoint, designed to slow down US forces and to inflict as many casualties as possible. The Japanese had pierced rock walls so that 20mm cannon fire could be placed on the streets. Many residential homes were turned into machinegun nests. The Japanese used all types of earthquake-proof structures such as private homes, churches, schools and government buildings, as isolated strongpoints. It was in the government buildings where the fiercest fighting took place.

The one obstacle not man-made in Manila was the Pasig River. By the time the US forces had entered the city, the six bridges that crossed the Pasig, connecting the northern and southern sections of the city, had been demolished by the Japanese. Of 101 bridges across the Pasig River, the Japanese succeeded in destroying 39. The river banks were reinforced by sea walls, impossible to be scaled from assault boats and impassable to LVT's. Only two points along the river were not edged by the walls.

The obstacles and fortifications had a tremendous affect on the battle. Large-scale unit operations were nonexistent. Instead, squad assault teams were formed to clear buildings. Heavy use of direct fire artillery became the rule. In some instances, 155mm howitzers were used as close as 600 meters to the targets. The fighting in buildings would continue for days as assault teams had to clear each floor and each room. The effective use of these obstacles by the enemy drastically slowed the progress of US forces through the city.

The General Post Office, Legislative, Finance and City Hall buildings that guarded the approaches to Intramuros were all key terrain. (See Appendix 1) These sturdily built and heavily fortified buildings, simultaneously served as obstacles and key terrain for the Japanese forces. Despite shelling by mortars, direct and indirect 155mm artillery fire and tank fire, the Finance building never collapsed. Its concrete was so strongly reinforced that the structure bent, rather than collapsed, slowly settling inward. Each of these buildings became a major battle unto itself requiring two to three days for clearing operations. After such awesome battles, the fall of Intramuros became anticlimatic.

During the battle, several buildings and locations outside of Manila were also considered as key terrain, affecting tactical planning. The city's water supply facilities and the electrical power installations became the initial priority of the 6th Army and XIV Corps:

Establishing priorities for the capture of individual installations, 6th Army ordered XIV Corps to secure first, Novaliches Dam about 2 1/2 miles east of the town of Novaliches; second, the Balara Water Filters, about 5 miles northeast of the city; fourth, the pipelines connecting these installations and leading them to Manila. In addition, XIV Corps was directed to secure the steam power plant which was situated near the center of the city on Provisor Island in the Pasig. (10)

These priorities were set by General Krueger who realized the tremendous sanitation problems that would be posed by the nearly one million civilians in Manila. The available city wells could supply enough water for two weeks. Likewise, the Japanese considered the water supply facilities and electrical power plant as key terrain. Documents of the 1st Cavalry Division record that the Japanese had prepared the Novaliches Dam and the Balara Water Filters for demolition. (11) Fortunately, these facilities were captured intact. However, the power station located on Provisor Island had been damaged by Japanese and American artillery during the battle. (12)

Approximately one mile from the city, the 11th Airborne Division also seized a key piece of terrain, Nichols Airfield, which effectively blocked the Japanese retreat from Manila.

Since the battle for Manila was essentially an urban one, advances along traditional avenues of approach ceased when the divisions entered the city. The 37th Infantry Division and 1st Cavalry Division approached the city from the north along the main avenue of approach, oriented along Highway 1 and Quezon Boulevard. The 11th Airborne Division advanced from the south along Highway 1 but never entered the city, stopping at Nichols Airfield. Once within the city limits, the 37th Infantry Division and 1st Cavalry Division elements began clearing operations, reducing various avenues of approach to platoon and squad size. Streets and city blocks were designated as boundaries to orient the force. As the attack progressed, the 1st Cavalry was shifted to the east of the city to continue south and then west towards the bay in an encircling action (Appendix 2). This approach effectively by-passed enemy resistance, linked the 1st Cavalry Division to the 11th Airborne and sealed the Japanese into the city. However, this approach also by-passed many major pockets of resistance, which later haunted the 1st Cavalry Division and the 37th Infantry Division. These pockets of resistance also broke the link with the 37th until the assault on Intramuros.

Movement along any avenue within the city was difficult. Back alleys, streets and breaches in walls were used by advancing forces. Once in the city, there was little room for maneuver and movement. Battles continued from house to house and street to street. As a clearing operation, pockets of resistance had to be eradicated. The traditional criteria for the selection of an avenue of approach was often violated, due to the nature of urban warfare and this type of operation.

The forces on the US side consisted of the XIV Corps of the Sixth US Army which approached Manila from the north. Their mission was to seize the city of Manila, destroy the enemy forces and free the internees, prisoners and civilians. The XIV Corps units involved in the attack from the north were the 37th Infantry Division on the right, and the 1st Cavalry Division on the left. The 37th Infantry Division was a standard triangular infantry division of WW II with three combat infantry regiments: the 129th, 145th, and 148th. The 1st Cavalry division was the single remaining "square" division in the US Army, consisting of two brigades each of two regiments of dismounted cavalry -- the 5th and 12th Cavalry in the 1st Brigade and the 7th and 8th Cavalry in the 2nd Brigade. The Cavalry regiments each had two squadrons smaller than a standard infantry battalion. (13) From the south, the 11th Airborne Division, XXIV Corps, Eighth US Army also attacked by making a coordinated amphibious assault and airborne jump to secure the area south of Manila.

The 11th Airborne Division consisted of two glider-infantry regiments, the 187th and 188th, of two battalions each, and the 511th Parachute Infantry consisting of three battalions. (14) (See Appendix 3 for U.S. strength figures)

There was an initial lack of clarity about boundaries between the two armies. General Krueger's Sixth Army was directed to attack from the north and seize Manila as a strategic objective, while at the same time, General Eichelberger's Eighth Army was planning to use the 11th Airborne division in a reconnaissance-in-force effort in the vicinity of Nasugbu, some 50 miles to the south of Manila. From there, the 11th Division would reconnoiter to the north and east to contain enemy forces and assess enemy strength in the region. Due to its initial tactical success and possibly due to the persuasive abilities of General Eichelberger, General MacArthur, at some point, gave permission to change the 11th Airborne's mission to advance on Manila. (15) Even though this mission was changed, nothing was done to establish control boundaries between the 6th and 8th Army. General Krueger had established an objective line for XIV Corps south of Manila, which was crossed by the 11th Airborne from the south as early as 6 February. There was increasing concern on the part of both forces that an accident would occur. The situation was finally resolved on 10 February when the 11th Airborne Division was attached to the XIV Corps. (16)

Within XIV Corps, close coordination existed between the subordinate units during the conduct of the battle. Attachments and detachments were readily effected to concentrate the main effort. For example, the 1st Brigade, 1st Cavalry division, was placed OPCON to the 37th Division from 17 February until 2 March. (17) However, during early operations, failure of the 37th and 1st Cavalry division to maintain contact had left a center of enemy resistance between the two units. (18)

American forces utilized numerous type weaponry within the city of Manila. Most noticeably were the tanks, tank destroyers, 75, 105, and 155mm howitzers, machine guns, mortars and flame throwers. Tanks were also used in a unique method of mine-clearing, as follows: a tank, with a cable attached to the front, would move forward with engineers behind; upon arrival at a mine, an engineer would jump out from behind the tank, run up to the mine, unscrew the fuse, loop the cable around it, and duck back behind the tank which would then back away pulling out the mine. This method resulted in a minimum of exposure of personnel to enemy fire. Fire support was provided by organic heavy automatic weapons and bazookas. Flame throwers were available on call from platoon or higher headquarters. Heavier artillery and armor support came from division level or corps and was tasked on a mission basis. During the attack on the city

tank destroyers and artillery were used in tremendous volume, both in an indirect and direct fire role. This fire power created breaches in walls and buildings in preparation for the assault on that area. Smoke was then used to obscure the initial attack and allow penetration of the area. Engineers were also used to demolish the heavy fortification and establish obstacles and barriers on expected enemy avenues of approach. Filipino guerrillas also joined US forces to provide intelligence, harass Japanese forces and interdict Japanese lines of communication and supply routes.

During city street fighting, communication means used by US forces included land-line telephones and runners at the lower echelons and voice radios between higher headquarters units. (19) Within the 37th Division, it was noted that COMSEC was not a major consideration, with many messages being sent in the clear. (20) Presumably, this was also the case in other divisions, since the Japanese had neither the equipment nor the organizational means to exploit any intercepted traffic of intelligence value.

With regard to intelligence activity, it would appear that the US forces enjoyed a significant advantage over the Japanese forces in intelligence assets. Source documents indicate that the US was able to use aerial photography, POW's and escapees, Filipino guerilla units and civilian informants. (21) Although normally taken as a composite, not all assets proved to be of equal value for gathering information. Ultra, used as a source of information, was not apparently a factor during the actual battle for the city.

Just prior to the battle for Manila, the Filipino guerrilla units had provided a wealth of information, proving their value (See Appendix 4, 5). The 11th Airborne Division particularly benefited from the guerrilla units used as scouts and guides during the approach to Manila and in an operation against the Los Banyos prison camp in Laguna Province. The information on Manila's surrounding areas, provided by the guerrillas was most valuable with information concerning the internal city somewhat conflicting at times and inaccurate.

The late January reports, often contradicting previous information that had been principally supplied by guerrillas, were usually so contradictory within themselves as to be useless as a basis for tactical planning. Thus much of the initial fighting was shadow boxing, with American troops expecting to come upon the main body of Japanese around each street corner. (22)

By most accounts, the US forces did not expect strong enemy resistance up until the time they entered the city. This is not

to say that guerrilla information was not used for the city battle. However, it appears that it was not as accurate as it could have been. Better use was made of information concerning the outside of the city.

Manila's civilians provided a great volume of information. However, this information required extensive analysis and evaluation. Often, civilian reports exaggerated the number of the enemy. This required corroboration of the information by patrols or consulting other sources.

One of the more significant sources of information during the battle proved to be aerial photography and interpretation. In conjunction with other sources, aerial photography was used almost on a daily basis as the situation in the city changed. "The need for constantly renewed coverage was shown in the Battle for Manila where physical changes wrought by fire and artillery bombardment and the constant preparation of new defensive positions by the enemy made it essential that new coverage be furnished every few days." (23) Aerial photos served as a basis for maps that were distributed at least down to company level and were recommended for distribution down to platoon level. A large amount of information provided by POWs and escapees was also included on these maps.

POWs and escapees appeared to be the most valuable and accurate sources of information for divisions involved in city fighting. Interrogation reports provided full accounts of enemy dispositions in and around Manila to include their planned suicidal defense. Enemy organizations, locations, movements, armaments and intentions were provided through interrogations on a daily basis until the end of the fighting. A series of reports dealing with the Legislative, Finance and Agricultural buildings provided an up-to-date picture of the enemy from 25 February to 2 March 1945. (24) The information provided by POWs and escapees appears to have been disseminated quite rapidly and incorporated into operational plans. Such was particularly evident in the 37th Infantry Division.

Overall, it appears that the above information sources were widely used by commanders as evidenced by their field orders. The most current and timely information was provided by POWs. Some problems in the timeliness of aerial photography was evident. One report stated that these photos rarely reached the user under 48 hours. However, they were updated by other sources. It would seem that the decision to send the 1st Cavalry Division on an "end run" was made after intelligence sources had located the enemy strength and defense plans. Prior to that time, no plan for maneuver had been devised. "Another factor which prevented early planning was the difficulty in determining the location of main enemy dispositions within the city." (25)

All of the American units were combat tested. US doctrine for the conduct of operations in built up areas was contained in FM31-50. According to XIV Corps, in its after action report, the current tactical doctrine was adequate, and was "used to great advantage by US Forces in the street fighting in Manila. In the ordinary street fighting most principles used were orthodox." (26) Further, the 37th Division had implemented special training for its rifle companies prior to the Luzon campaign, to insure that each company had a platoon-sized team specialized in the conduct of an assault of a fortified position. (27)

The limitations placed on artillery support fires and air support operations were the only departures from orthodox tactics of city fighting. No new doctrines were used or developed and the battle of Manila proved that established US Army doctrine was sound. Although most troops had some training in city fighting, for combat in Manila, the main problem was to adapt the minds accustomed to jungle warfare to the special conditions of city operations.

From the division or corps headquarters level, training and tactical doctrine may have been judged adequate; however, from a combat soldier's perspective, a different picture emerges.

Because of the Japanese decision to fight within the city of Manila, the US forces were to experience the art of urban warfare for the first time in the Pacific. The American troops quickly learned to attack buildings by rushing to the top and then clearing down. Previously they had done the reverse; entering from the bottom and trying to clear up. This latter method resulted in failure. Tanks and artillery were utilized successfully to fight the MOUT operations. Aircraft were not utilized in an effort to preserve the historic landmarks of Manila. The ultimate weapon, however, still proved to be the infantry soldier on the ground.

According to a 1st Cavalry Division troop commander who participated in the fight for the Agriculture Building and the Philippine General Hospital, no tactical doctrine existed which adequately prescribed methods for dealing with heavily-reinforced buildings, fortifications, tunnels, booby-traps, and pill boxes.

"Commanders . . . had no definite plan of operation. When one thing failed, we would try something else. . . from the collective experiences of all the units employed, a new plan would be constituted for the next day. . . we threw away the manuals when we assaulted those buildings; there were no rules and no inflexible tactical pattern. Each new situation

had to be met as it presented itself; tactics were 90 percent improvised . . . our experience indicates the need for training based on the lessons learned." (28)

At first, the contrast between the two perspectives seems striking; however, it is probably explainable in terms of the different understandings of the meaning of tactical doctrine. To the higher headquarters, it was a generalized approach for accomplishing the overall mission, which must be adapted to the local, specific situation. In contrast, the young officers may have expected doctrine to provide a formula for expeditiously handling with minimum casualties, a tactical situation which was unique in his experience. Further, he was no doubt reacting to the inherently brutal nature of urban warfare, which tends to be submerged in the abstract language of the after-action reports of higher headquarters staffs.

Nevertheless, both the 37th Division and the XIV Corps noted significant tactical "lessons learned" in their after-action reports, lending the impression that there were gaps in the doctrine for urban combat. Indeed, according to the preface to the XIV Corps after-action report, HQ Sixth Army noted, "The Battle for Manila presented the first instance in the present war in which a metropolitan city strongly defended by the Japanese was assaulted and captured by US forces. The account of this engagement has obvious value in training for future operations." (29) Clearly contemplated in the statement "for future operations" was an ultimate attack on the Japanese homeland; the Manila experience no doubt influenced the estimates for such an operation, giving an appreciation of the costs and protracted nature.

Logistically, the XIV Corps operated by the traditional supply point distribution system, stocking forward with the divisions picking up their supplies whenever possible. Round-the-clock transportation operations were needed to resupply the units since bridges in the Paseo area had been destroyed. Items were often transloaded several times before they reached the units. This method was used until Manila bay and the city were secured.

After Corps elements entered the city of Manila, logistical requirements were primarily to bring forward needed classes of supply. Ammunition resupply became the biggest concern due to large quantities and weight factor (See Appendix 6, 7, 8, 9). For example, XIV Corps moved 3,300 truck loads and 11,500 tons of organic artillery ammunition to units fighting in Manila during February 1945. For the most part, American units did not suffer any significant supply shortages. The units were well supplied before their initial assault with consumable supplies and major end items up to authorized levels of supplies.

The 37th Infantry Division and 1st Cavalry Division did have to use emergency rations to feed the large number of liberated civilians and military internees, freed after US entry into Manila. These supplies were quickly replaced. US units also experienced water point closings in Manila from 10 to 11 February 1945. Blood plasma was the only item critically short throughout the battle.

Personnel were replaced on an individual basis and funneled through the 12th Replacement Battalion on Luzon. Replacements were not provided as quickly as casualties occurred, but no critical personnel shortages developed. Arriving replacements had received satisfactory training, although MOUT training was not emphasized. However, the shortage of transportation assets did hamper the movement of replacements upon arrival in country and caused units to pick up their own replacements.

For the first four days of the campaign, casualties were evacuated from division medical installations to the medical companies of the engineer special brigade. One such company acted as a beach clearing station for each of the assault divisions. The casualties were, in turn, delivered to the naval beach parties for evacuation on amphibious craft. The seriously wounded were treated at the clearing companies which were functioning as a division hospital and not merely a clearing station. This was effective due to the distance to the nearest hospital. By the end of February, three evacuation hospitals and one field hospital were in Manila; one evacuation hospital was a Guagua, just north of Manila Bay; the 3d Field Hospital was at Dlong Apo; and the 37th Field Hospital was at San Jose. The evacuation of US casualties proceeded smoothly and efficiently throughout the campaign.

The condition and morale of the fighting forces in the battle for Manila offer an interesting contrast. Prior to 31 January, combat engagements had been largely isolated and sporadic. The 1st Cavalry Division, after completing its initial concentration and beginning its subsequent move from Guimba, encountered only light resistance during its move to Manila. Combat engagements for the unit reached a new level of intensity after arrival at the outskirts of the city. The most experienced division involved in the battle for Manila was the 1st Cavalry Division. Forces from this division had prior campaign experience as part of the X Corps under 6th Army during the invasion of Leyte.

In contrast, forces of the 37th Division experienced a greater number of combat actions immediately prior to their fight for Manila. They had attacked and seized Angeles and Clark Air Center against relatively light resistance on 26 January. Upon turning and driving west to secure Fort Stotsenburg, some of the Division's elements encountered heavy

enemy resistance.

The combat actions involving the 37th Infantry Division and the 1st Cavalry Division were all successful despite differing levels of resistance by Japanese forces encountered in their drive south. Lengthy engagements were the exception rather than the rule during unit movements south. American forces suffered only low casualty rates prior to the fight for Manila.

The condition and morale of the 37th and 1st Cavalry Division forces were good in the days prior to the actual battle of Manila. Despite their steady movement south against light resistance, personnel were still affected by the heat and fatigue from continuous operations. "The overall health of the American forces was good throughout January and February, but there was a progressive increase in disease. Causative factors for this increase in disease were identified as fatigue, malaria, poor sanitation practices by the enemy, venereal disease, and the spread of bacillary dysentery due to large numbers of unburied dead." (30)

There is no question that the American soldier believed in his cause during the fight for Manila. In addition to the memory of a past defeat on Luzon, the more immediate commitment to defeating the Japanese was the ultimate mission and objective. There can be little doubt that the rescue of almost 4,800 Allied internees from Santo Tomas University and Bilibid Prison deepened the sense of commitment felt by the American soldier. In addition, the harsh mistreatment of Filipino civilians by the Japanese probably had a significant impact upon American sensibilities. The pro-American attitude expressed by the Filipinos, viewing the Americans as liberators, also had a reaffirming effect upon the soldiers' commitment.

If courage, gallantry and self-sacrifice can be used to measure a soldier's commitment, then consider 21 Silver Stars and 1 Congressional Medal of Honor awarded to soldiers of the 1st Cavalry Division for their efforts in Manila. (31)

The intense close-quarter fighting was a new experience for American forces. This new dimension of combat surely had an impact upon soldiers' performance, increasing their level of frustration by constantly eliminating pockets of resistance. It can only be speculated that the constant anticipation and expectation of Japanese forces appearing from virtually any direction had an erosive effect upon the individual and collective morale of the American forces.

Despite the hardships experienced by the 37th Infantry, 1st Cavalry and 11th Airborne divisions, their morale was good throughout the combat actions for Manila. This level of morale can be attributed to the efforts of the 6th and 8th Army to

provide all available care and services to the soldiers within the commands. Attempts to contribute to improved conditions and morale were manifested in many ways. Constant efforts were maintained to improve mail service to the combat units. There appeared to be a universal acceptance that "of all factors contributing to the morale of the troops, promptness in delivery of mail far outweighed any other." (32) Closely associated with the delivery of mail efforts was the decision to relax unnecessary censorship regulations. This action, particularly, within the 37th Infantry Division, produced "beneficial results to morale throughout the command." (33) Other examples of the leadership's concern for the condition and morale of the troops were demonstrated by the command's emphasis on service provided by the Red Cross, Army Chaplains, and USO services at rest camps when practical. Medical care for the soldier was a constant focal point of command interest as was the concern for improving sanitation conditions within operational areas. (34) Another action taken was the 6th Army Commander receiving authority "to effect combat appointments of enlisted men and warrant officers as second lieutenants. This procedure, although not wholly satisfactory, greatly expedited appointments and was of material benefit to morale." (35)

Subdelegation was also utilized awarding certain decorations. Prior to the initiation of hostilities on Luzon, 6th Army issued policy guidance on awarding decorations: "awards, when properly utilized are important incentives to greater effort and instrumental in building and maintaining morale." (36) Sixth Army was so concerned with maintaining the state of morale within the command that recurring morale reports were initiated. These reports would require the identity of the unit and the "degree of morale would be expressed in one of the following terms: Excellent, Very Satisfactory, Satisfactory, and Poor. If unsatisfactory morale conditions existed, comments were desired. For example, '999th Evacuation Hospital -- Poor. This unit recently bombed and strafed by enemy aircraft.'" (37)

Of all the measures taken to improve or maintain unit morale, perhaps the single most important measure was contributed by the small unit leader, who stayed at the forefront of his forces throughout the combat actions. One of the main reasons that US soldiers conducted themselves so gallantly was because of this type of courageous, devoted to duty leadership. This kind of leadership was largely responsible for maintaining morale, as well as a high state of discipline within the ranks of the US forces.

Unlike the US forces, the Japanese commander experienced major problems in the area of command, control and communications. The problems are traceable to the fundamental confusion that existed within the Japanese chain of command as to whether or not Manila would be defended in the overall plan

for the defense of the Philippines. The Japanese decision to defend Manila was perhaps unwise. The situation of the Japanese forces in Luzon certainly did not make it necessary for them to make a stand in the city. The initial missions given to the Japanese forces were to protect the coastal areas from penetration by enemy forces and then to delay enemy landing forces. With no air power and lacking strength to defend forward, the Japanese decided on delaying actions and counterattacks as the best defense. These actions would consume maximum enemy strength and gain time to reinforce Japanese defenses on Formosa and Rynhyus. These plans envisioned an initial effort to defend the coastal areas. Delaying actions would then follow with the purpose of retarding the capture of key inland communication points and airfields. The last phase would be a prolonged last-ditch stand in the northern mountain regions designated as the area of final resistance. (See Appendix 10)

The northern mountain area of Luzon was chosen for two reasons: first, because of its strategic importance in delaying subsequent enemy operations against Formosa and Rynhyus; second, it provided the most favorable tactical conditions for extended resistance due to the mountains and few routes of entry from the central Luzon plains. As reported earlier, General Yamishita structured his forces into three groups. The Shobu Group consisted of 140,000 troops in the north, the Kembu Group consisted of 30,000 troops to the east, and the Shimbu group in the south consisted of 80,000 troops. The Shimbu group, Japanese Army forces was under General Yokoyama, who commanded the Army's Manila Defense force. Its mission was to prepare for limited demolition and evacuation of the city. However, at the same time, Vice Admiral Okochi, Commander of the Southwestern Area Fleet and ranking naval officer in the Philippines, concentrated his troops in Manila to protect the naval installations. Eventually, 16,000 naval troops, under the command of Admiral Duabachi, the Manila Naval Defense force (MNDF) were left in the city with the mission of holding Nichols Airfield, the Canite Naval Base area, directing local attacks and conducting extensive demolition activities. (38) This mission given to naval forces was more extensive than the mission given to the ground forces and it involved significant ground action.

Admiral Okochi formally transferred operational control of the Manila Naval Defense Force to General Yokoyama, but Admiral Duabachi refused to accede to Yokoyama's actual operational command until he had completed all missions previously assigned by Okochi. Despite a series of staff coordination meetings between the MNDF and the Shimbu Group, unity of effort was never attained prior to the actual combat for the defense of the city. There was significant ambiguity about the intent of Yokoyama, who after chopping the remaining Army units in Manila to

Duabachi, ordered the defense of the city. By his word choice, Yokoyama did not imply a fight to the death. He was probably uncertain about that type of order Duabachi would accept. (39)

The speed and direction of the American attack further added to the confusion within the Japanese command structure. The Japanese expected the main attack from the south and initially had their defenses oriented in that direction. The 1st Cavalry's speed of advance after the landings further surprised the enemy. The 1st Cavalry covered 100 miles in 66 hours.

Within the MNDF, forces were initially loosely organized with sector responsibilities assigned to counter expected attacks from seaward or from the south. Colonel Noguchi commanded two provisional army battalions and one provisional naval battalion. This constituted the Northern Sector Unit, responsible for the area north of the Pasig River. These troops were a mixture of depot, base and service units, some recent inductees, and remnants of various units which had passed through Manila from time to time. (40) The Army forces had regular weaponry of machine guns, artillery, mortars and anti-tank guns (usually of the 47 mm type).

South of the Pasig River, a number of miscellaneous naval units were arrayed. These were grouped into an Eastern Sector Unit, under LT Nishiyama; a HQ Sector unit, under LT Djichi; the Kusnoki Sector unit under LT Ine; the Tachibana Sector unit under LT Shimiza; the Nichol Sector unit, under LCDR Mineo; the Canite Sector unit under CDR Imagawa; the Isthmus Sector unit under Army CPT Abe; and the Sakura Sector unit under LCDR Ogawa. (41) Like the units in the north, these units were also a conglomeration consisting of base defense, service and flying units, and crew members of naval and civilian vessels incapacitated in Manila Bay. (42)

The naval battalions utilized antiaircraft weapons ranging from 20-90mm, which were removed from destroyed ships and downed aircraft. (See Appendix II) Some personnel were armed with primitive weapons such as spears and cutlasses. The city of Manila also housed a Japanese factory that manufactured grenades and mines, providing easy access to these types of munitions. With the addition of construction engineers, who made up the occupation forces of the Japanese, the capability for demolition was great within the MNDF.

Japanese sources and assets for gathering intelligence information were few. Prior to the battle, the Japanese defenders continued to receive information through communications with their higher headquarters. This information lacked the true composition and strength of US forces. The Japanese initially thought that the American forces would attack

from the south and established their defenses accordingly, only to have the 37th Division and 1st Cavalry Division attack from the north.

The Japanese had a difficult time forcing local civilians to work for them because of atrocities committed by the Japanese during the occupation. However, the Japanese were able to employ a few pro-Japanese on intelligence missions. They also used special intelligence units composed of Japanese soldiers who strongly resembled Filipinos. The mission of these units was to fool the Americans and infiltrate their lines. Interrogations of captured spies disclosed that they were not directed to gather any special intelligence but were instructed to report on the locations of troops, installations, movements and strengths.

Whether the Japanese were able to use the information that they received is difficult to discern. It appeared that the Japanese commander made an initial effort to shift his defenses, allowing extraction of his troops, based on information received one week prior to the city battle. However, once the battle had begun, it was evident that the commander would not withdraw his troops regardless of the amount of enemy information.

The Japanese forces occupying Manila were generally in an abysmal state of training. As previously noted, they were a mixture of service troops, naval crews, depot workers and others who had never previously been constituted or trained as ground maneuver forces. Their defensive doctrine appears to have been based on the presumed tenacity and resourcefulness of the individual combatant - for no coordinated defensive doctrine, such as delay, withdrawal, reassemble, and counterattack, was in evidence. To the extent that doctrine was present, it was in the consistently elaborate barriers, mines and fortifications, centered on individual positions, using all available materials and munitions, which were designed to extract the largest possible price in time and casualties for the American advance. (43)

Generally speaking, the health of the Japanese forces defending Manila was good. Many of the personnel were acclimated to the weather and heat; however, they were not immune to malaria. Control of disease was a progressive problem for all forces within the Manila area. With over 800,000 civilians alone in Manila, facilities became increasingly inadequate. In early February, when intense combat actions hit the streets of Manila, the resulting battle damage exacerbated the problems of limited facilities and services. There was a scarcity of food and economy of supply was practiced by the Japanese forces. Another factor relative to the health of the Japanese forces was that of poor sanitation practices and their

inability to bury their dead. This gave rise to increased disease, transmitted by the tremendous numbers of flies.

Despite little training in ground combat techniques, the Japanese utilized the structures and buildings of the city to their full advantage. The difficulty encountered in defending the city was obvious and only speculation can be offered in terms of specific impact upon their morale. Because of the unique mental and fighting characteristics of the Japanese soldier, it is difficult to separate morale from his sense of discipline and commitment. It is undeniable that he believed in the cause of the fight.

"This spirit of resolve and commitment to duty by the Japanese soldier and sailor proved to be a primary cause for his continued fanatical defense of Manila despite successive defeats, superior enemy forces, lack of materiel, lack of services, growing hardship, and the growing doubt of ultimate death." (44) This strong determination and commitment to duty also accounted for the high state of readiness within their forces even though many personnel were not regular combat soldiers. It should be realized that this patriotic fervor was not peculiar to the Japanese soldier alone. This attitude was "reflected in the national spirit of the Japanese nation as a whole." (45) Perhaps in the mind of each Japanese soldier was the conviction that he was defending Japan. Regardless, Japanese public opinion fully supported its forward fighting forces.

Despite the hardships experienced by Japanese forces in defense of Manila, they were well cared for within the confines of limited resources. The Japanese leadership was committed to carry out its mission and it seemed its soldiers were encouraged by the promise of a glorious death! The defensive tenacity demonstrated by the Japanese forces in the defense of Manila is a classical example of combat operations in urbanized terrain.

All logistic operations for the Japanese forces were conducted before the battle for Manila began. Once fighting started, the Japanese were cut off from resupply and existed on what had been stockpiled at their defensive positions. Even though the Japanese had held the Philippines for several years, resupply of the islands had been steadily decreasing due to the US blockade in the Pacific. At the time of the battle, virtually no resupply took place.

Each soldier or sailor was responsible to maintain their own weapon. The stockpiling of supplies in each strongpoint position effectively isolated the Japanese units. With little if any communication, the units were directed to fight to the death with little hope of reinforcement.

Communications between the MNDF and the Shimbu Group headquarters initially consisted of a wire line between Yokayama and Duabachi's initial headquarters at Fort McKinley. (46) Wire also was used within and between units within the city. The lines were constantly interdicted by Filipino guerrillas and by US artillery barrages.

After encirclement of the city with the 11th Airborne occupying the southern area, the 1st Cavalry the eastern area and the 37th Infantry Division the northern area, Duabachi was effectively isolated from his higher headquarters. Some tentative attempts to withdraw the MNDF in coordination with counterattacks from the Shimbu Group failed because of lack of timely communication. After 17 February, Duabachi had resigned himself to fight his units to the last man but without any overall scheme of defensive maneuver. Some forces did infiltrate through the US lines back to the Japanese forces, but as many as 13,000 Japanese were killed within the city of Manila. Units simply occupied their ground and fought to the death. Command disintegrated as troops fought with "viciousness" and committed ". . . all sorts of excesses, both against the city itself and against Filipinos unlucky enough to remain under Japanese control.": (47)

The desperate nature of the Japanese situation is reflected in the following Kobayashi Group Order of 13 February (an element of the Northern Sector unit):

1. The Americans who have penetrated into Manila have about 1,000 army troops, and there are several thousand Filipino guerrillas. Even women and children have become guerillas.
2. All people on the battlefield with the exception of Japanese military personnel, Japanese civilians, special construction units (GANAPS in the Filipino language) will be put to the death. Houses_____ (order breaks off here). (48)

These actions resulted in the destruction of numerous buildings, warehouses, factories, docks, piers and landmarks within Manila because the Japanese hoped to delay and hinder the advance of American forces. By delaying the US forces, coastal ports of Manila were used by the Japanese to allow more supplies and equipment to reach their forces. Also, the Japanese used Manila factories to manufacture grenades, mines and other explosives; thus, they did not want these factories to fall into enemy hands.

"The Fight"

On 9 January, the 6th US Army landed at Lingayen Gulf. Its mission was to consolidate the beachhead, establish air and land base facilities, secure the central plain, and capture Manila. LTG Krueger attacked with two corps on line with 4 divisions abreast. (Appendix 12) Opposition was light and by nightfall, 68,000 men had landed. On 11 January, the floating reserves landed and on the 17th, the 25th Division was committed to combat in the I Corps area. The stiffest resistance was encountered in the Cabaruan Hills on the Army's left flank. The XIV Corps pushed south and encountered the Kembu Group around Clark Field. Bitter fighting raged for about seven days until the area was secured. Throughout January, General MacArthur was frustrated with the slow progress toward Manila and was very anxious to achieve the political advantage of securing the capitol. However, General Krueger was concerned about his left flank being exposed to counterattack and was not anxious to extend his forces.

On 31 January, the 1st Cavalry Division was moved to Guimba, and the 11th Airborne Division with two glider infantry regiments of 1,500 men each landed at Nasubu Bay. (Appendix 15) Originally, this was supposed to be a reconnaissance in force by the 1st Battalion/188th Glider Infantry Regiment. However, since the attack met such light resistance and was so successful, the rest of the 11th Division followed minus the parachute regiment. This initiated a rush toward Manila from the south and General Eichelberger's 8th Army was anxious to be the first US unit into the city. The movement and disposition of US forces are shown on maps at Appendix 14 through 17.

The Japanese' decision to defend the city was the result of confusion and diffusion of command. This resulted in Navy forces flowing into the city while the Army forces evacuated. Controversy sprang up over who was in charge. The Naval units were technically OPCON to the Shimbu Group but the Navy felt that this was only after completion of the Navy mission. On the 9th of February, Admiral Iwabuchi began to have second thoughts about a determined defense of the city. He moved his headquarters to Fort McKinley in anticipation of an evacuation to the south. Japanese activities over the next week are very confusing. Apparently, General Yokoyama the commanding officer of the Shimbu Group, planned a counterattack against the US Forces and he sent Admiral Iwabuchi back into the city. It may also be that the Admiral went back into the city on his own volition since he was afraid Fort McKinley would fall before the city itself. The counterattack was launched on a limited basis and was a failure. On the 15th, General Yamashita formally ordered everyone out of the city. Iwabuchi did not receive this order until the 17th. At that point, it was too late even if he

intended to honor the order. He was directed to infiltrate out of the city, but refused. At this point, General Yamashita placed the approximate 4,000 Army troops in the city under the Navy's control.

Once the decision to defend the city was made, the Japanese Commander disposed his forces as listed below and shown on the map at Appendix 13:

JAPANESE MANILA DEFENSE FORCE

<u>UNIT</u>	<u>LOCATION</u>
31st Special Base Force	Ermita Area
Northern Force:	
20 Inf Bn (Prov)	Binondo Area
3d Inf Bn (Prov)	Intramuros
1st Ind Nav Bn	SJuan DelMonte
3d Shipping Depot	Intramuros
Central Force:	
HQ Bn Manila Naval Defense Force	Ermita Area
1st Nav Bn	Pandakan Area
2d Nav Bn	Malate Area
5th Nav Bn	Ermita Area
Southern Force:	
3d Nav Bn	Nichols Field
4th Nav Bn	Ft McKinley
Abe Inf Bn (Prov)	Bicotan

The Japanese units at each of the locations were not tactically deployed in linear defense patterns. They established a series of strong points within the various areas and prepared to defend these strong points independently.

When XIV Corps reached the outskirts of Manila, no definite plan existed for operations in the city. Everyone hoped the city could be cleared with a minimum of damage and casualties, but as the situation changed and strong Japanese resistance increased, this proved to be a false hope. Plans were developed

on the spot as the situation dictated. Initial plans called for the seizure of the city's water and power sources, isolation of Manila, and the clearing of the city.

In contrast, the mission of the Japanese Manila Defense Force was to defend as long as possible, destroy facilities, and be prepared to withdraw to the east.

General Krueger's strategy for retaking Manila involved an assault from two directions. From the north, the 1st Cavalry and 37th Division of XIV Corps would be the main attack. A smaller force, the 11th Airborne Division, would attack from the south.

On 31 January 1945, XIV Corps completed its preparation for the missions assigned by Sixth Army Field Order 46, DTG 23001, 30 Jan 45, (49):

Para 3b, XIV Corps - (1) Continue current missions and protect western flank of 6th Army in zone.

(2) Continue to push aggressively to southwest. . . secure crossings over the Pampanga River within zone. . . be prepared promptly to continue to advance to capture Manila. (50)

The 37th Division seized and secured the site of the destroyed Pampanga River bridge at Calumpit on 31 January without meeting enemy opposition. The 148th Infantry crossed the Pampanga River and sped south along Route 3. The regiment met only minor opposition over the next two days enroute to Marilao. During the same period, one battalion worked east from Calumpit toward Plaridel along the Quinua and Angat Rivers. At Plaridel, one of the Shimbu Group's infantry battalions was quickly overcome, and the town and the Angat River bridge were secured. (51) Contact was also made with elements of the 1st Cavalry Division near Plaridel. By late evening of 2 February, one motorized element had seized and secured Malolas on Highway 3 and then advanced a distance of 10,000 yards southeast of the town. Another column, advancing southeast on Highway 5 from Plaridel, had reached a point 10,000 yards south. (52)

The 1st Cavalry Division began advancing south from Guimba and crossing the Pampanga River at Cabanatuan on 1 February. For this drive to Manila, General Mudge, the ADCM of the 1st Cavalry Division, reinforced motorized squadrons which became known as "Flying Columns" Each included a cavalry squadron, medium tank company, 105 mm howitzer battery, other support elements, and sufficient vehicles to lift all troops. (53) The Flying Columns raced down Highway 5 slowing only to make contact with the 37th Division at Plaridel. By the evening of 2 February, the 1st Cavalry held Santa Maria.

On 31 January, the 11th Airborne Division, less the 511th Parachute Infantry Regiment, but reinforced by two battalions of the 24th Division, landed by water to establish a virtually uncontested beachhead at Nasugbu, 35 miles southwest of Manila. On 4 February, the remaining parachute regiment of the 11th Airborne dropped on Tagaytay Ridge on the north shore of Lake Taal. This united the division which moved northward along Highway 17 toward Manila. Opposition was minor until 1800 hours on 4 February; at Pananaque. The unit found a bridge across the Pananaque River badly damaged and covered by Japanese infantry, mortar and artillery fire. The 11th Airborne Division was stopped four miles south of Manila. (54)

The Japanese Manila Naval Defense Force issued an order to all subordinate commands within the Shimbu Group on 27 January:

1. General Operation Plan:

The Shimbu Group will concentrate its main strength in the key positions to the east of Manila and assemble maximum supplies in preparation for prolonged and self-sufficient operations. I will exploit the advantages of terrain and strongly fortified positions to crush the enemy attacks on the positions and will seize tactical opportunities for carrying out strong raiding counterattacks. It will firmly defend Manila and Fort McKinley and check their use by the enemy, at the same time destroying the enemy's fighting strength and preparing to counterattack the enemy rear from the main positions when a favorable situation arises.

2. Mission of Manila Naval Defense Force:

The Naval Defense Force will defend its already established positions and crush the enemy's fighting strength. (55)

As soon as this order was given, the Naval Defense Force found itself faced with a rapidly closing two-pronged attack.

While the Uno Battalion was aided by the destroyed bridges northwest of Manila in the delay of the 37th Division, the Kawashima Force was only able to employ small-scale raids against the eastern flank of the advancing cavalry columns. The two defending forces to the north were not mobile, and had the difficult mission of trying to delay the advancing American

divisions.

Tactically, Iwabuchi's defensive positions, though occasionally mutually supporting, did not lend themselves to a second line of prepared positions. Seldom were any two defense lines mutually supporting. Little provision was made for withdrawal routes. The core of the defenses, if any existed, was Intramuros.

On 3 February, the XIV Corps attacked Manila in accordance with the Sixth Army Field Order 47:

Para 3b, XIV Corps -

- (1) Continue current missions.
- (2) Continue aggressive advance to the southwest; capture Manila.
- (3) Protect left flank of the 6th Army. (56)

Neither the 37th Division nor 1st Cavalry Division had experienced any serious Japanese resistance along the defensive line of the unbridged Angat River.

The 1st Cavalry Division, in an enveloping move, drove through Santa Maria, the Novaliches watershed area, Novaliches Town and reached Grace Park in the northwestern section of Manila by the evening of 3 February. In less than three days, the 1st Cavalry had traversed over 100 miles.

As forward elements advanced from Angat River, two Filipino scouts brought word that 4,000 American and other Allied prisoners were interned at Santo Tomas University. These two scouts then led the lead column to the gates of Santo Tomas Internment Camp. Resistance on the University grounds was stiff. With tank support, the cavalrymen forced the main gates and crushed all Japanese resistance. All internees were released except for 221 who were held by a Japanese prison contingent as temporary hostages and released the following day. (57)

One objective of the Flying Columns was the Legislative Building on the south side of the Pasig River. The only remaining bridge across this obstacle was the Quezon Bridge. A cavalry troop set out for the Legislative Building using the Quezon Boulevard toward the bridge. The Japanese directed a devastating fusillade of mortar and small arms fire from the Far Eastern University just north of the river. The troopers found the university to be defended by machine guns, anti-tank guns, and an impregnable road block. Quickly seizing up the situation, General Chase, the 1st Cavalry Division Commander, decided that the best course would be to consolidate all his

troops on the Santo Tomas University grounds and try for the Legislative Building later when more troops had arrived. (58)

Meanwhile, farther to the north, elements of the second Flying Column (7th Cavalry) captured the important water supply installations, the Novaliches Dam, followed by the San Juan Reservoir and the Balara Filters. Three of the four main parts of the Manila water supply system were now secure. The fourth part, Ipo Dam, was not secured until 17 May. (59)

With regard to the principles of war, the Americans made use of all the principles of war, specifically, objective, offensive, mass, economy of force, maneuver, unity of command, security, surprise and simplicity. US operations were directed towards a clearly defined, decisive and attainable objective; they seized, retained and exploited the initiative by conducting the attack without delay. They concentrated combat power at the decisive place and time. They allocated minimum-essential combat power to secondary efforts as exemplified by the organization of the Special Security Force to take care of the area north of the river while the main operations south of the river were being conducted. They outmaneuvered the enemy. US efforts were placed under one responsible commander. Surprise was achieved by swift river crossing operations and by attacking from the north instead of the south where the enemy had expected the attack. US plans were simple. On the other hand, the Japanese were a heterogeneous group and unity of effort was difficult to attain. They were pegged to a static defense, failing to take advantage of principles of offense and maneuver.

On 5 February, elements of the 37th and 1st Cavalry Division had reached the north bank of the Pasig River. The 37th Division had captured Bilibid Prison the day before, liberating 1,024 Allied internees. The 37th Division was now engaged in a clearing operation north of the Pasig River, from the shorelines in the west to the center of the city, near Malacanang Palace. This included the commercial sector of Manila which was now burning after the Japanese had deliberately set it on fire. The 1st Cavalry Division had just captured Santo Tomas University and liberated 3,521 Allied prisoners. They occupied Malacanang Palace, but had failed to secure the third objective, the Legislative Building on the south side of the Pasig River. This was due to very stiff Japanese resistance in the vicinity of the Far Eastern University and Old Bilibid Prison near Quezon Bridge.

The Japanese High Command decided to evacuate the northern part of the city and to organize their main defensive position south of the Pasig River. Japanese forces had feverishly strengthened the defenses of the southern part of the city and

had destroyed all bridges before the 37th and 1st Cavalry Division reached the north bank. As already stated, the Japanese force south of the Pasig River was a heterogeneous group, consisting of both naval and army troops. Although they were incapable of tactical maneuver, they were well adapted to a static defense whose core was Intramuros and Ermita, comprised of commercial, residential and government centers south of Intramuros. The Japanese had converted their defensive area into a veritable fortress. It should be noted that the great number of Japanese automatic weapons was out of proportion to their troop strength. Artillery pieces were also emplaced in the upper stories of buildings where they could deliver fire.

An amphibious landing from the west across Dewey Boulevard was considered inadvisable. The XIV Corps' plan for the assault on South Manila directed the 37th Division to drive due south across the Pasig River with the 1st Cavalry Division to make an envelopment to the east, cross the river, move southwest to the shore, and then attack the Japanese from the south northward.

On 6 February, the 37th and 1st Cavalry Divisions continued their mopping up operations north of the river. On 7 February, the 37th Division assumed control of the Santo Tomas-Malacanang Palace area allowing the 1st Cavalry Division to move eastward and begin an envelopment of Manila. Directed by the Corps Commander to cross the river at the earliest possible time, the 37th Division ordered the 148th Infantry to make an amphibious crossing a few hundred yards east of the palace. At 1515 hours, under the covering fire of artillery, an ineffective smoke screen on the west flank, and direct fire of M-7s, the regiment started crossing in engineer assault boats. By 1600 hours, the regiment had advanced 500 yards from the opposite bank. The first wave met no opposition but succeeding waves received intense machine gun, mortar and artillery fires which continued throughout the day and night. Before this operation, restrictions on the use of artillery had been imposed on the Americans to lessen the damage to property and avoid killing or injuring Filipino citizens. However, after experiencing the enemy's indiscriminate use of artillery and burning of the city, most of the restrictions on the American side had been lifted. Meanwhile, on this same day, the 11th Airborne Division of the Eighth Army, which had been advancing toward Manila from the south, had reached Paranaque and was preparing to attack Nichols Field.

On 8 February, after the 129th Infantry had crossed the river at the same point used by the 148th Infantry, the 37th Division, having established a bridgehead to a depth of 1,500 yards and a width of 2,000 yards, turned west and drove towards the Intramuros district. Meanwhile, a Special Security Force was tasked to quell disturbances north of the river. On the 9th

of February, the division advance was stopped at the Paco district by bitter enemy resistance. The 1st Cavalry Division also met a strong resistance in its drive through the eastern suburbs, particularly in the New Manila Subdivision and Rosario Heights where it was blocked by mines and fire from six-inch naval guns, 20 mm anti-aircraft guns, and heavy machine guns. The fighting was bitter and the progress was slow, but by midnight of 9 February, the division was disposed along the north bank of the Pasig River.

On 10 February, under cover of a heavy artillery preparation, the 1st Cavalry Division crossed the Pasig River at two points, one in the vicinity of Santa Ana and the other at Makati. The 8th Cavalry, which crossed the river at Santa Ana, used a pontoon bridge installed by the division engineers. The 5th Cavalry, which crossed the river at Makati and which operated on the 8th Cavalry's left flank, used native bancas. The speed with which the division established a bridgehead on the far side, took the Japanese by surprise. The units of the division south of the river then advanced rapidly to the southwest, overrunning Neilson Field in the process. They reached the shore of Manila Bay in the vicinity of the Polo Club on the 11th, and established contact with the 11th Airborne Division which was by now under the control of the XIV Corps. The 1st Cavalry Division then turned north and attacked towards the Port Area and Intramuros. The 37th Division continued its drive westward, seizing Provisor Island, securing the power plant, and advancing its left flank in an enveloping maneuver to gain the southeastern approaches to Intramuros.

On 14 February, the line of contact was as shown at Appendix 18. At this stage, the enemy had been compressed into an area small enough to require the attention of only a part of the XIV Corps, effecting a new distribution of forces. The 37th Division, with the 1st Cavalry Brigade of the 1st Cavalry Division attached, was assigned the mission of clearing the rest of the city. The remainder of the 1st Cavalry Division was ordered to seize Fort McKinley, east of Manila, and to push across the Marikina River to develop the enemy's defenses in the hills farther to the east. The 11th Airborne Division, having captured Cavite Naval Base and Nichols Field south of Manila, was given the task to support the 1st Cavalry Division's attack on Fort McKinley and to drive through to the northwestern shore of Laguna de Bay and then turn southward.

On 16 February, the 37th Division reached the eastern edge of Intramuros with its left end unit approximately 1,800 yards south of the southern wall. The 1st Cavalry Brigade had cleared the enemy from the coastal area between the Polo Club and Harrison Park and were driving north against increasingly determined resistance. From this day until 22 February, the 37th Division reinforced by the 1st Cavalry Brigade, continued

to close in on enemy forces. The fighting was done from house to house and street to street. Some structures, particularly the larger public buildings, were like individual fortresses and it sometimes required more than a day of continuous fighting to overcome one. In the case of the Manila Hotel, the battle inside the building raged for three days, starting from the Mezzanine floor to the top floor. By 22 February, the Japanese had been forced back into a small area included Intramuros, and a very small area to the south where the modern fireproof government buildings were located.

At 0730 hours, 23 February, the 37th Division launched the final assault on Intramuros. It was known that many nonbelligerents were within the perimeter, the majority were women and children. As early as 16 February, it became apparent that the final struggle for Manila would take place there. A message was broadcast in Japanese offering an honorable surrender and requesting that, in any event, all civilians be evacuated. When this message went unheeded, plans were immediately formulated for the assault. The assault began with preparatory artillery fires directed on selected targets such as observation posts and mortar and artillery emplacements. At 0830 hours, the 129th and 145th Infantry Regiments of the 37th Division began simultaneous assaults from the north and east, respectively. The 129th Infantry crossed the Pasig River in assault boats and assaulted the north wall. Little opposition was met at both the north and east walls. but once inside the walls, a savage house-to-house and floor-to-floor fighting took place. One by one, the ruined buildings, ancient dungeons, numerous tunnels and recesses that harbored the enemy were turned into deathtraps by hand grenades, flame throwers, and gasoline poured down into holes and ignited. Progress was delayed while some 2,000 refugees streamed out, but by noon of 25 February, after clearing the basement of Fort Santiago, the entire area of Intramuros was held by American troops.

Meanwhile, the 1st Cavalry Brigade, assisted later by a regiment of the 37th Division, operated outside Intramuros, attacking northward along the shore of Manila Bay. Its zone included the area occupied by the government buildings. Here the struggle was no less fierce. For nine days, the fighting moved from building to building and room to room. Finally, on 4 March, the last building was cleared, and Manila was completely liberated.

The outcome of this battle resulted in the destruction of Japanese defenses and the final elimination of all Japanese resistance in Manila. (60) US Forces were clearly victorious. They were better organized and equipped to fight in the city of Manila. They employed massed artillery focused on pin-pointed Japanese targets causing the complete destruction of targeted positions. The US forces had great superiority in weapons,

particularly direct fire, such as tanks, tank destroyers and self-propelled howitzers. The US tactic of using small units working from building to building, securing the top floor of a building first and then working down through the lower floors was very successful. In fighting from room to room, explosives were freely used to make holes in the walls through which grenades or flame throwers could be used against the enemy in adjacent rooms. Automatic weapons and mortars were used as support and covering fires. (61) Because of the strength of the buildings in Manila, it was necessary to employ all weapons available in the preparatory fires to insure that troops could gain a foothold in the fortified buildings. Direct fire weapons proved effective only after hours of shelling had literally torn the buildings apart. (62)

The Japanese utilized prepared positions well even though the defense was imperfectly coordinated. The individual soldiers fought tenaciously and skillfully to the end, using all available weapons and barriers. It should be emphasized that the Japanese defense of Manila was influenced by factors which may not be present in other similar operations. Some of these factors complicated the defense: (1) The relative scarcity of weapons needed to defend a large city. (2) The lack of training and inexperience of the majority of the Japanese troops. (3) The conglomerate nature of these troops did not facilitate control or coordination during the battle. (4) The presence of essentially an unfriendly civilian population.

Factors that contributed to the defense were: (1) The disproportionately large number of automatic weapons available as a result of the cannibalization of armament on planes and ships. (2) The prohibition against aerial bombing by American forces. (3) The initial restrictions on artillery fire, prompted by a desire to preserve property to the greatest possible extent. (4) The US forces efforts to protect the civilian population

The Japanese tactics, or lack of, contributed to their total defeat. Their defensive system was based around a series of strong-points at street intersections, screened by outposts and snipers. They defended every substantial building in the city and fought savagely until they were killed. This defense system lacked mobility; thus, the Japanese were unable to move supplies and equipment as the tactical necessity demanded. (63)

The cost of retaking Manila had not been light. The XIV Corps lost over 1,000 men killed and 5,500 wounded in the metropolitan area from 3 February through 3 March. The Japanese lost some 16,000 men killed in and around Manila. Of this total, the Manila Naval Defense Force lost at least 12,500 men. The remainder of Admiral Iwabuchi's 17,000 man garrison escaped across the Marikina River. The various Shimbu Group units were

overrun on the periphery of the metropolitan area, or killed during the abortive counterattack. The number of dead soldiers disposed of by the enemy or buried in the ruins of destroyed buildings and in underground tunnels could not be determined. The breakdown of losses among major US units is at Appendix 18.

On the part of the civilians, millions upon millions of dollars of damage had been suffered, and approximately 100,000 civilians had lost their lives during the battle. The city was a shambles after the battle was over. The public transportation system no longer existed. The water supply and sewage systems needed extensive repair. The electric power facilities did not function and most of the streets needed repaving. Thirty-nine bridges had been destroyed, including the six over Pasig River. Government buildings, schools and hospitals had been destroyed and private residences had been badly battered. The Battle of Manila was indeed over, but its effects would be long felt.

Japanese equipment captured in the Manila area, either intact or damaged, is shown at Appendix 19. There was an enormous quantity of all types of Japanese supplies and equipment captured. On the US side, with the exception of some 400-500 tons of ammunition lost due to aerial bombing, the quantities of supplies lost from enemy action were negligible.

The Japanese captured no American prisoners except for one pilot who was released at the end of the campaign. The Japanese commanders told their men that Americans killed their prisoners even though most Japanese troops did not believe that this was American policy.

The US forces captured 1,579 POWs. General MacArthur directed that POWs captured on Luzon would not be evacuated, but would be delivered to Army Service Command (ASCOM) for internment. Each division was directed to establish prisoner of war collecting points and enclosures.

Preparations for future operations began even while the battle for Manila raged on. XIV Corps completed preparations for operations to the east of Manila to secure the line Tanti-Antipolo-Mountalban to defend the Manila area and prepare the drive south to Ternate, securing the southern approaches to Manila Bay. General MacArthur's overall campaign plan required the clearing of all the islands in the Archipelago that had been bypassed.

The immediate subsequent objectives for the US forces were to return to Batan and Corregidor to secure the key terrain that controlled the sea approach to Manila Bay, the strategic objective in the campaign.

The Japanese forces were preparing to defend Corregidor and Fort Drum in the Bay to deny the harbor to the Americans. The overall plan called for the Japanese forces to withdraw to the mountains to the northeast and continue the defense. Despite the high number of casualties suffered during the battle, the Japanese did manage to exfiltrate some survivors to the mountains and were still conducting a stubborn resistance at the end of the war in the Pacific.

SECTION V

"The Significance of the Action."

Although fighting was still going on in the Philippines, at the end of the war in the Pacific, the strategic issue in the Philippines had long been decided. The only strategic objectives, the Luzon Central Plains and Manila Bay, had been secured since March. The most decisive action had been the recapture of Manila.

The seizure of Manila assured the United States of a basing area capable of launching the still scheduled invasion of Japan and providing bases which allowed the attack on Japanese lines of communication to the Indies.

On the Japanese side, the cost of the battle was high: 16,000 killed and the key to the overall loss of the Philippines. The Japanese loss of the Philippine foothold was the harbinger of ultimate victory for the Allies. Approximately 380,000 Japanese were isolated or killed in the Philippine campaign, making fewer soldiers available for the defense of Japan.

Just as the battle of Manila was the key to the Philippine Campaign, the reconquest of the Philippines was the keystone in the plans to invade Japan. If the end of the war had not come so suddenly, the Philippine Campaign and thus Manila may have ranked among the decisive battles. As it stands, had the outcome of the war been known, Manila may have been spared the destruction. Unfortunately, at the time of the battle, there appeared no choice.

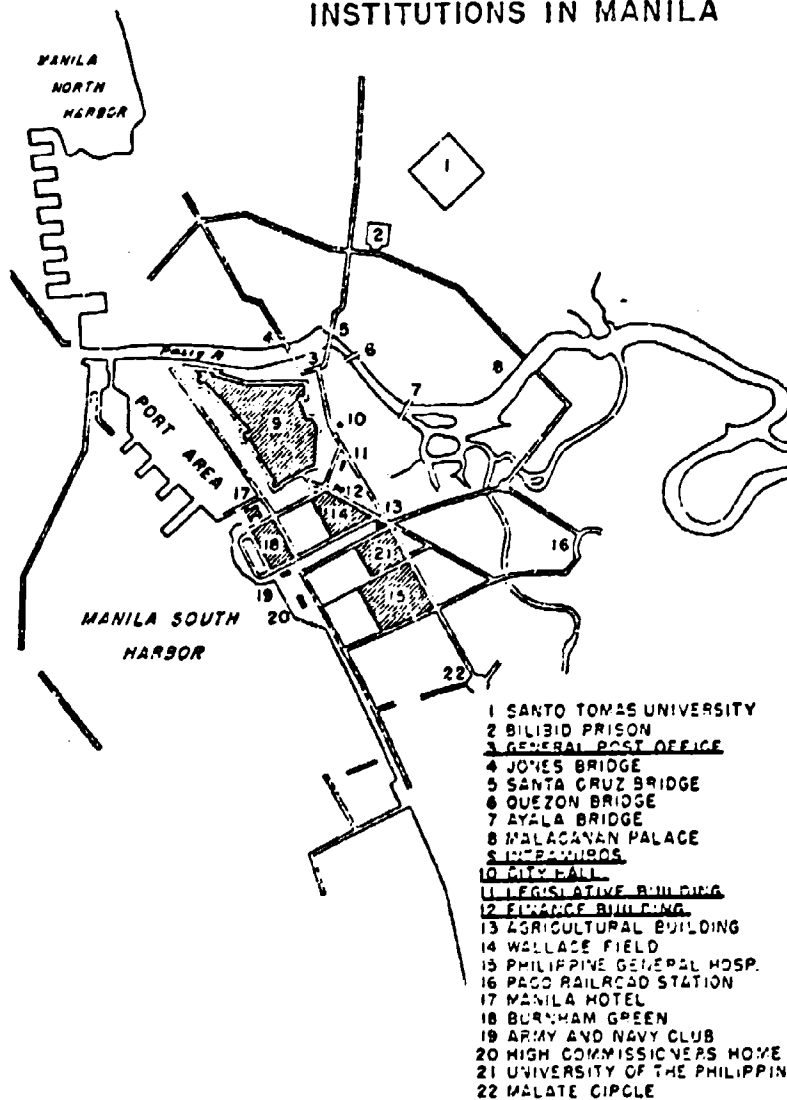
In terms of "new" lessons learned, little came from this battle. However, several "truths" were reinforced: city fighting is very slow, very costly, and very dependent on small unit actions. Mass artillery fire was used on point targets to reduce them and allow them to be cleared by infantry, which as usual, had to bear the brunt of the casualties.

Although ideally suited for house-to-house (or in some cases, floor-to-floor) fighting, light infantry required the support of massive artillery to clear the city without prohibitive casualties. (This might bear consideration in light of one of the missions of the US Light Division.)

The stubbornness of the Japanese resistance and the number of casualties sustained by the attacking forces must have

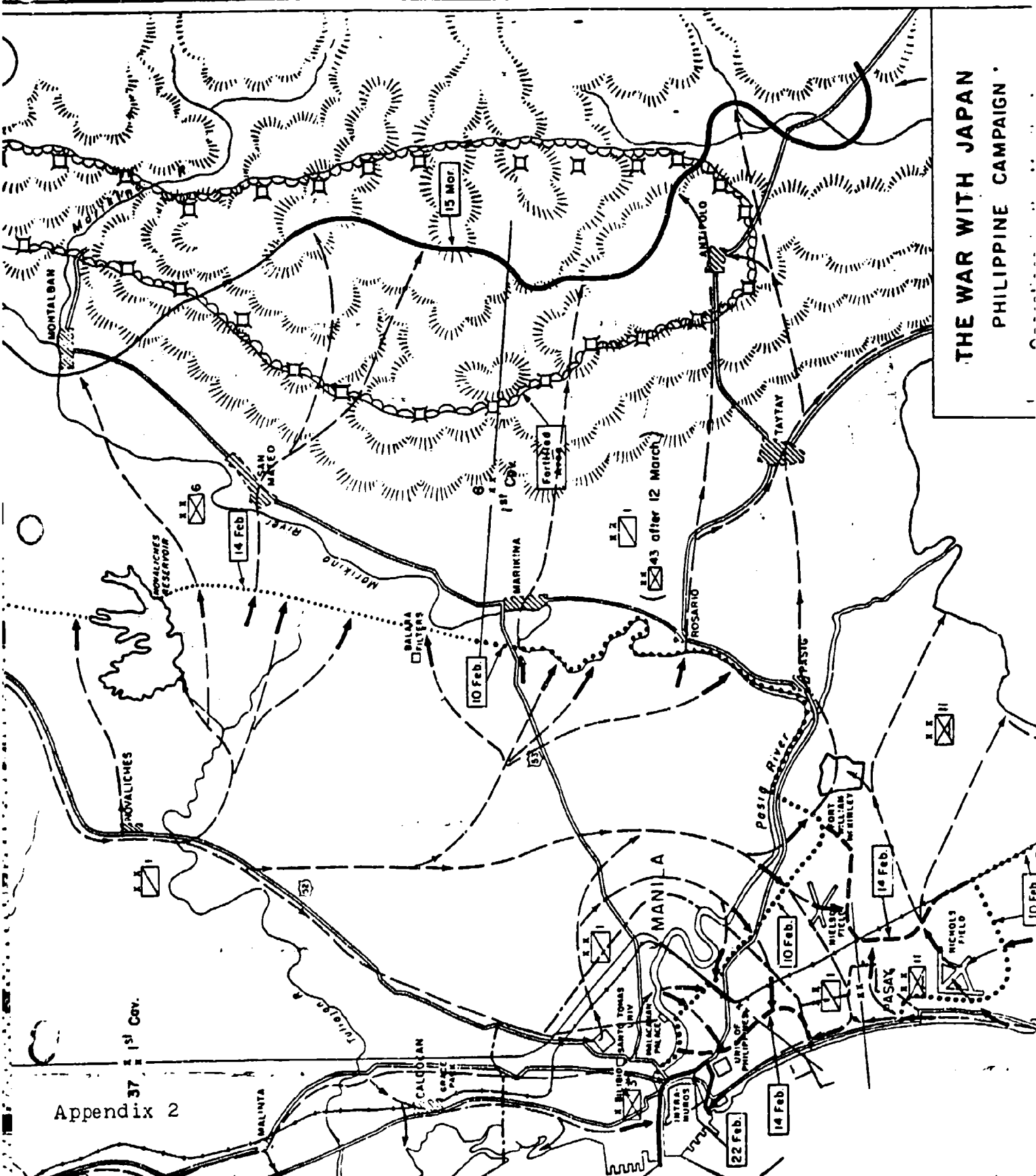
been of grave concern when facing the prospect of having to invade the Japanese homeland. This prospect could have contributed to the decision to end the war by use of nuclear weapons and avoid what would have been a most costly and bloody campaign. In that sense, the Battle of Manila may have much more significance than realized.

INSTITUTIONS IN MANILA



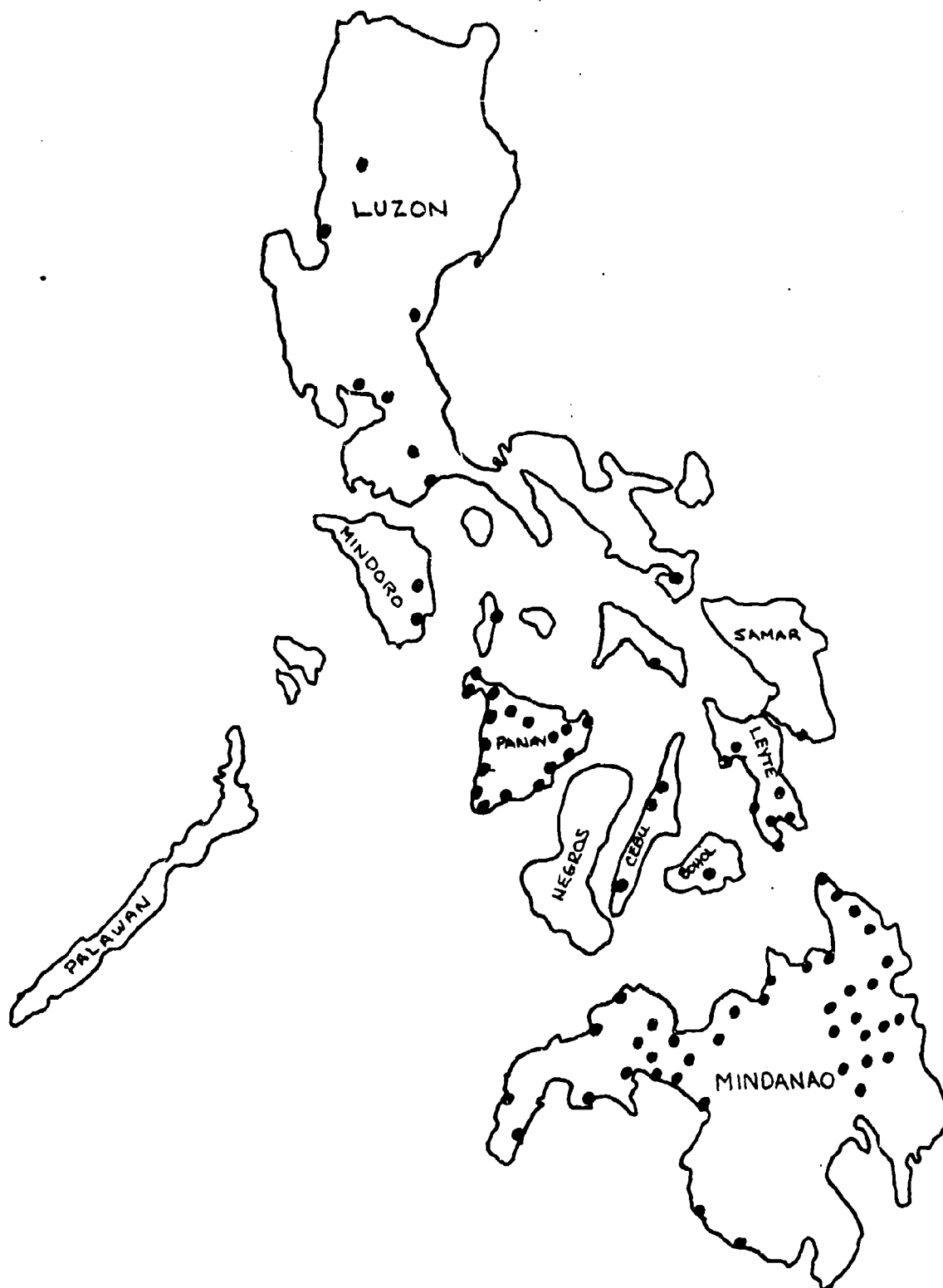
PHYSICAL PLAN OF CITY OF MANILA

**THE WAR WITH JAPAN
PHILIPPINE CAMPAIGN**

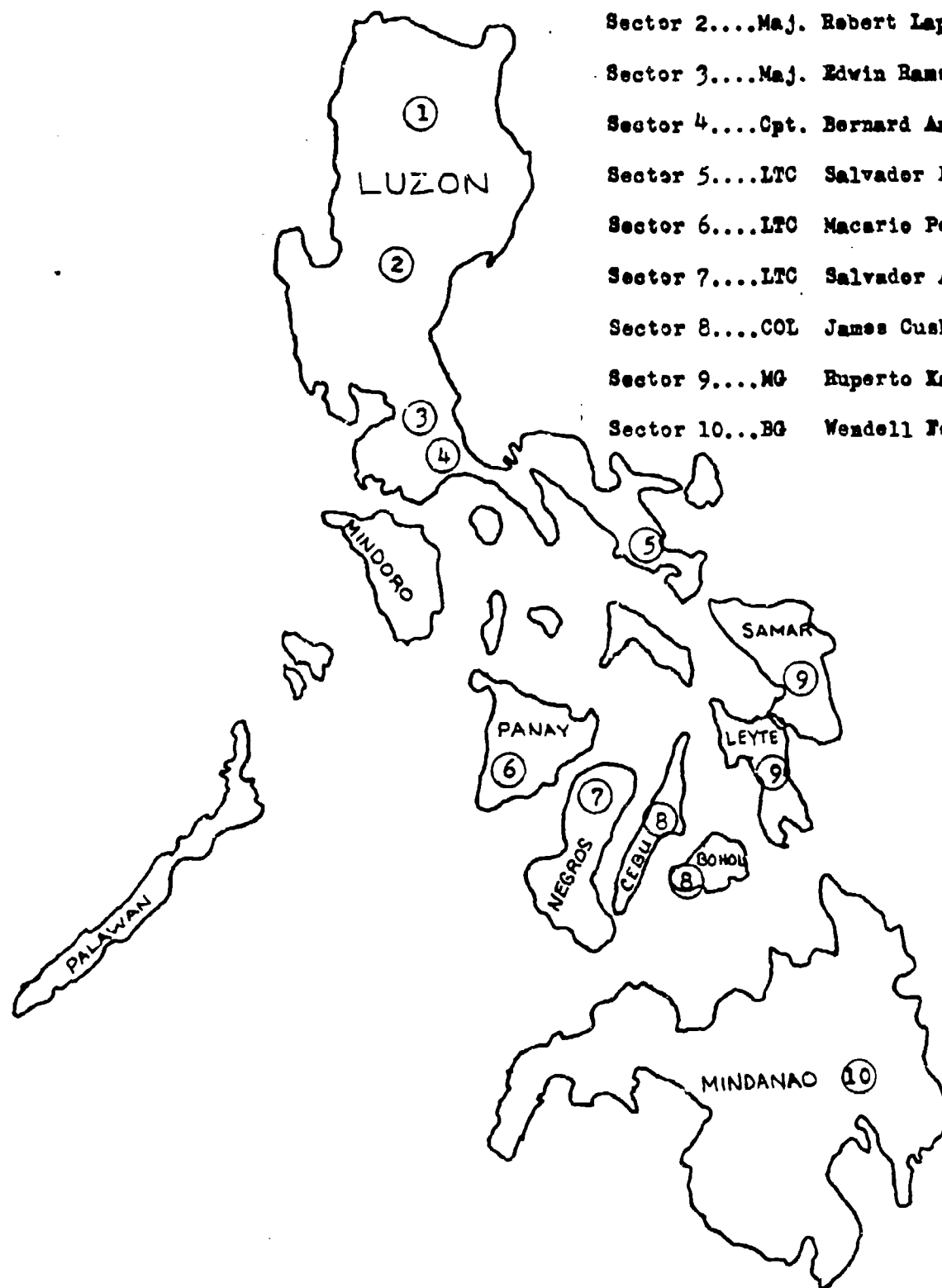


COMBAT STRENGTHS FOR U.S. UNITS
(Average for Battle of Manila Period)

37th Infantry Division	14,322
1st Cavalry Division	10,100
11th Airborne Division	12,700



GUERRILLA RADIO STATION (Transmitting and Receiving) LOCATIONS (OCT. 1944)



Sector 1....Maj. Russell Volkman
 Sector 2....Maj. Robert Laphan
 Sector 3....Maj. Edwin Ramsay
 Sector 4....Cpt. Bernard Anderson
 Sector 5....LTC Salvador Escudero
 Sector 6....LTC Macario Peralta
 Sector 7....LTC Salvador Abcede
 Sector 8....COL James Cushing
 Sector 9....MG Ruperto Kangleon
 Sector 10...BG Wendell Fertig

Battle Sectors of Guerrilla Forces (and leaders) Operating in Philippines

Table No. 1

Total XIV Corps expenditures for Period 9 Jan to 3 Mar

ORGANIC ARTILLERY

WEAPON	ROUNDS	UNITS OF FIRE	TONS	TRUCK LOAD #
75mm HOW	18,465	3.84	233.8	66.7
105mm HOW	219,989	6.47	7,809.6	2,254.6
155mm HOW	50,485	6.12	3,053.4	872.4
155mm GUN	5,518	4.59	410.3	117.2
TOTALS	294,457		11,507.1	3,310.9

Truckloads figured on 3.5 ton average load/truck

Source: XIV Corps After Action Report of Operation M-1.

Table No. 2

Average Daily Expenditure for Period 9 Jan to 3 Mar

ORGANIC ARTILLERY

WEAPON	ROUNDS	UNITS OF FIRE	TONS	TRUCK LOAD ##
75mm HOW#	637	.129	7.6	2.2
105mm HOW	4,074	.120	144.6	41.3
155mm HOW	935	.115	49.2	16.9
155mm GUN	102	.085	4.7	1.3
TOTALS	5,748		215.9	61.7

75mm HOW under Corps control for only 29 days of the
54 day period

Truckloads figured on 3.5 ton average load/truck

Source: XIV Corps After Action Report, of Operation M-1.

Table No. 3

Average Daily Expenditure for Period 22 Feb to 3 Mar

ORGANIC ARTILLERY

WEAPON	ROUNDS	UNITS OF FIRE	TONS	TRUCK LOAD #
75mm HOW#	1,040	.217	13.2	3.9
105mm HOW	4,934	.117	155.9	44.6
155mm HOW	1,235	.138	77.9	22.3
155mm GUN	104	.087	4.7	1.3
TOTALS	7,313		251.7	72.1

Truckloads figured on 3.5 ton average load/truck

Source: XIV Corps After Action Report of Operation M-1.

Table No. 4

Total Expenditure of 60mm and 81mm Mortar Ammunition
for period 9 Jan to 3 March 1945

ITEM	ROUNDS	UNITS OF FIRE	TONS	TRUCK LOADS
60mm HE	68,210	2.85	197.02	56.3
81mm HE	150,762	3.94	1,026.18	293.2

Table No. 5

Average daily expenditures of 60mm and 81mm Mortar
Ammunition for period 9 Jan to 3 March 1945

ITEM	ROUNDS	UNITS OF FIRE	TONS	TRUCK LOADS
60mm HE	1,261	.053	3.14	1.0
81mm HE	2,792	.073	22.69	6.5

Table No. 6

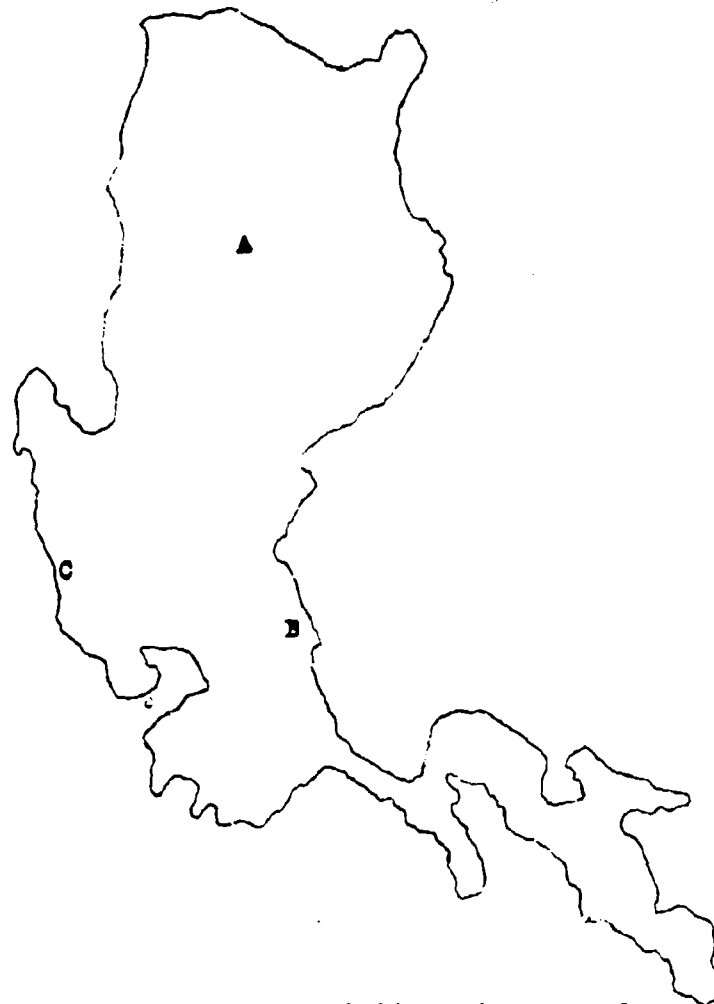
Average daily expenditures of 60mm and 81mm Mortar
Ammunition for period 23 Feb to 3 March 1945

ITEM	ROUNDS	UNITS OF FIRE	TONS	TRUCK LOADS
60mm HE	1,910	.050	5.51	2.0
81mm HE	4,829	.100	39.28	11.2

Source: XIV Corps After Action Report of Operation M-1.

Appendix 7

GENERAL YAMASHITA'S FORCE DISPOSITIONS
(JAN 1945)



A.....152,000 men.....mountain strongholds; to harass and
tie down Americans

B.....80,000 men.....to hold southern Luzon and hills east of Manila controlling
city's water supply

C.....30,000 men.....in mountains overlooking Clark Field complex

WEAPONS UTILIZED BY JAPANESE FORCES IN
DEFENSE OF MANILA

20mm aircraft cannons

25mm automatic cannons (model 96)

13mm machine guns (model 93)

47mm AT guns

12cm naval guns

7.7mm Lewis machine guns (model 92)

7.92 light Bren-type machine gun

40mm anti-aircraft guns

15cm mortars

81mm mortars

90mm mortars

50mm grenade dischargers

447mm rockets

20cm naval spin-stabilized rockets

20cm army spin-stabilized rockets

12cm Type 10 high angle gun (navy) - backbone of Japanese artillery defense

8cm (3 in) high angle gun (navy)

75mm field gun (model 38)

Small (1/3 kg) aerial bombs used as grenades

explosive cakes

pipe grenades (improvised)

molotov cocktails (red phosphorous)

hand grenades

U.S. M1903 rifles

M1903 rifles

M1911 pistols

M-1 rifles

Browning automatic rifles

WEAPONS (cont.)

Cal. 50 machine guns

Vomiting gas candles

HCM grenades

Flame-throwers - very few

Tanks - few encountered

Armored cars - few seen

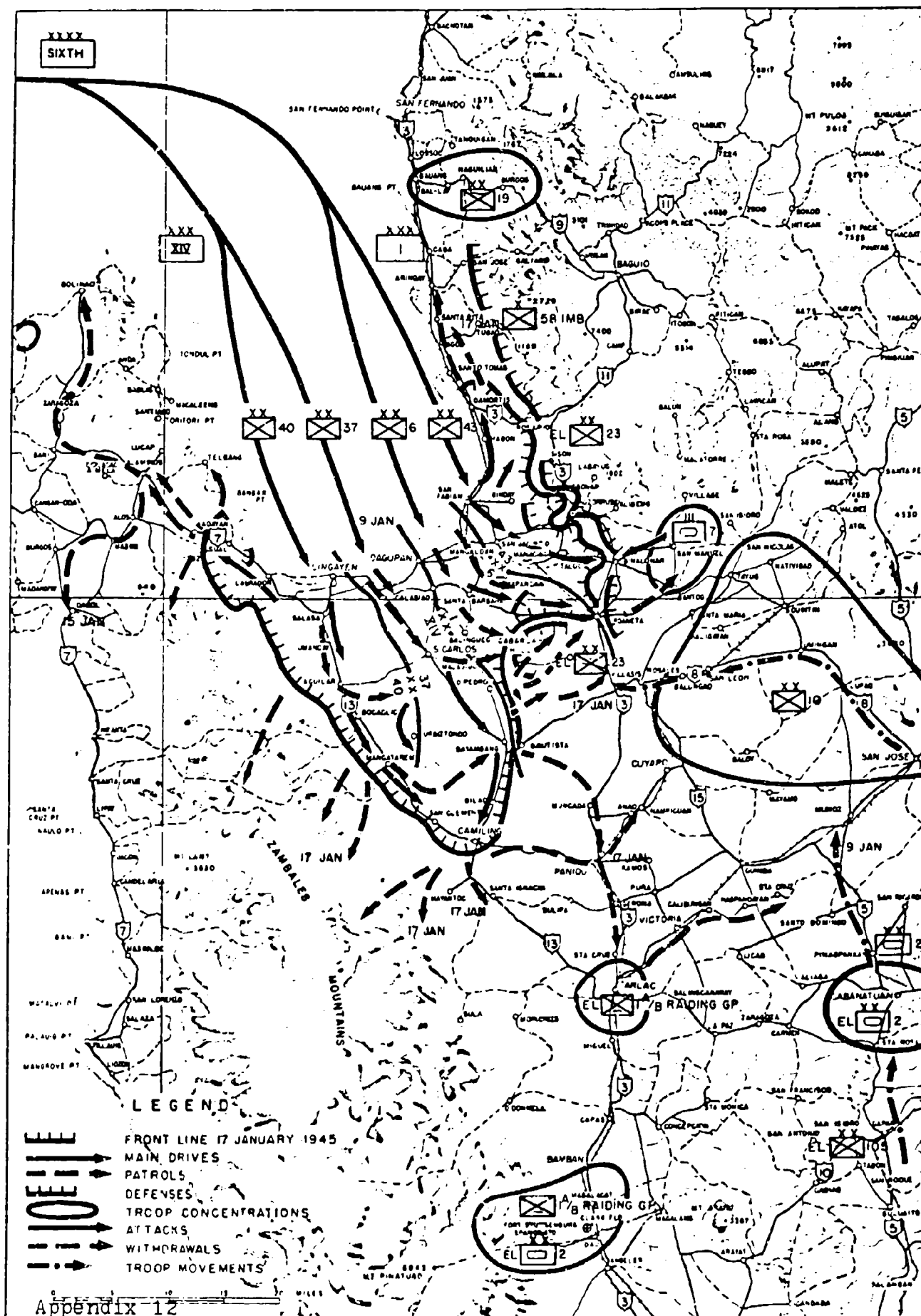
Beach mines

ceramic mines

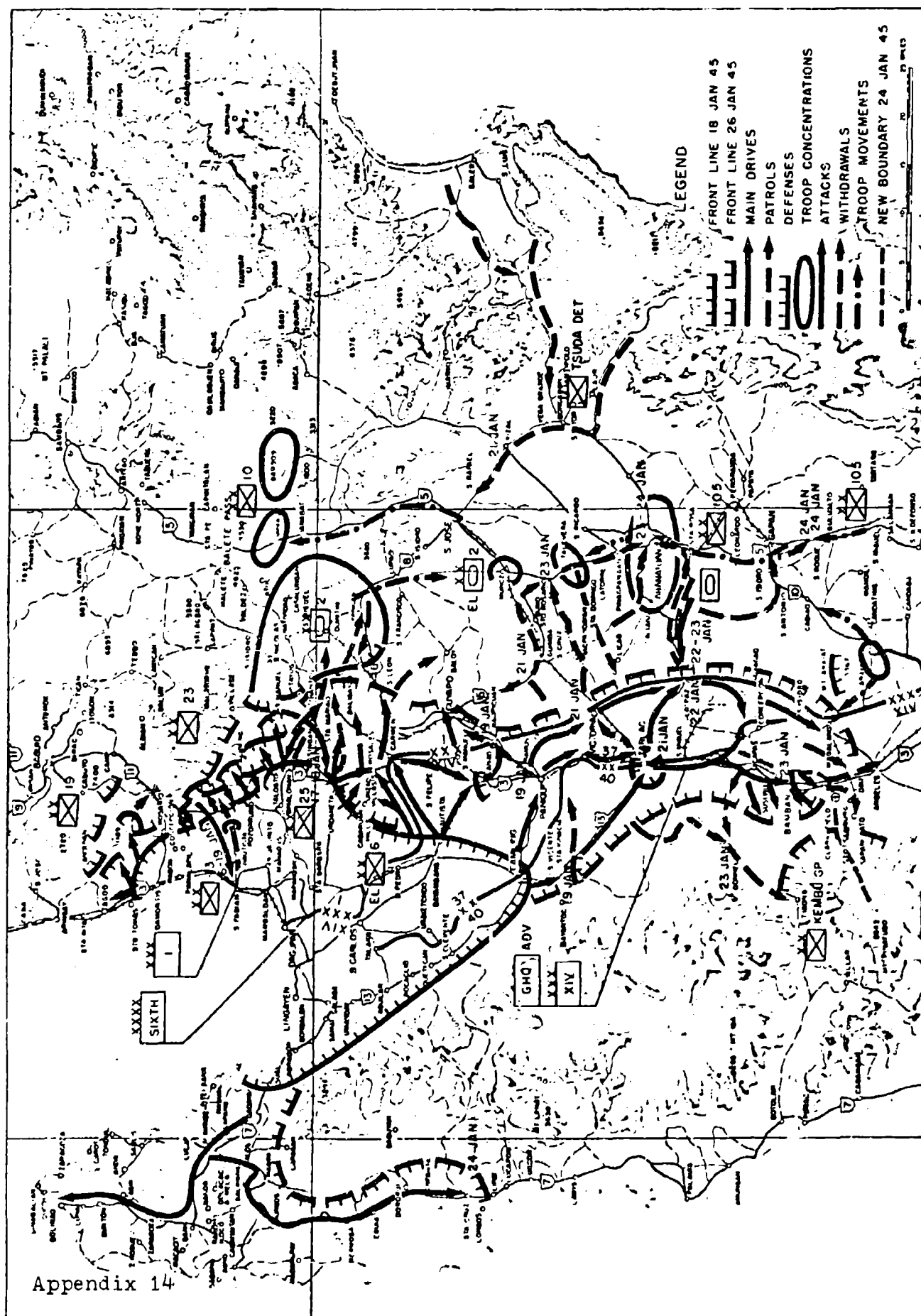
Depth charges - modified for use as mines

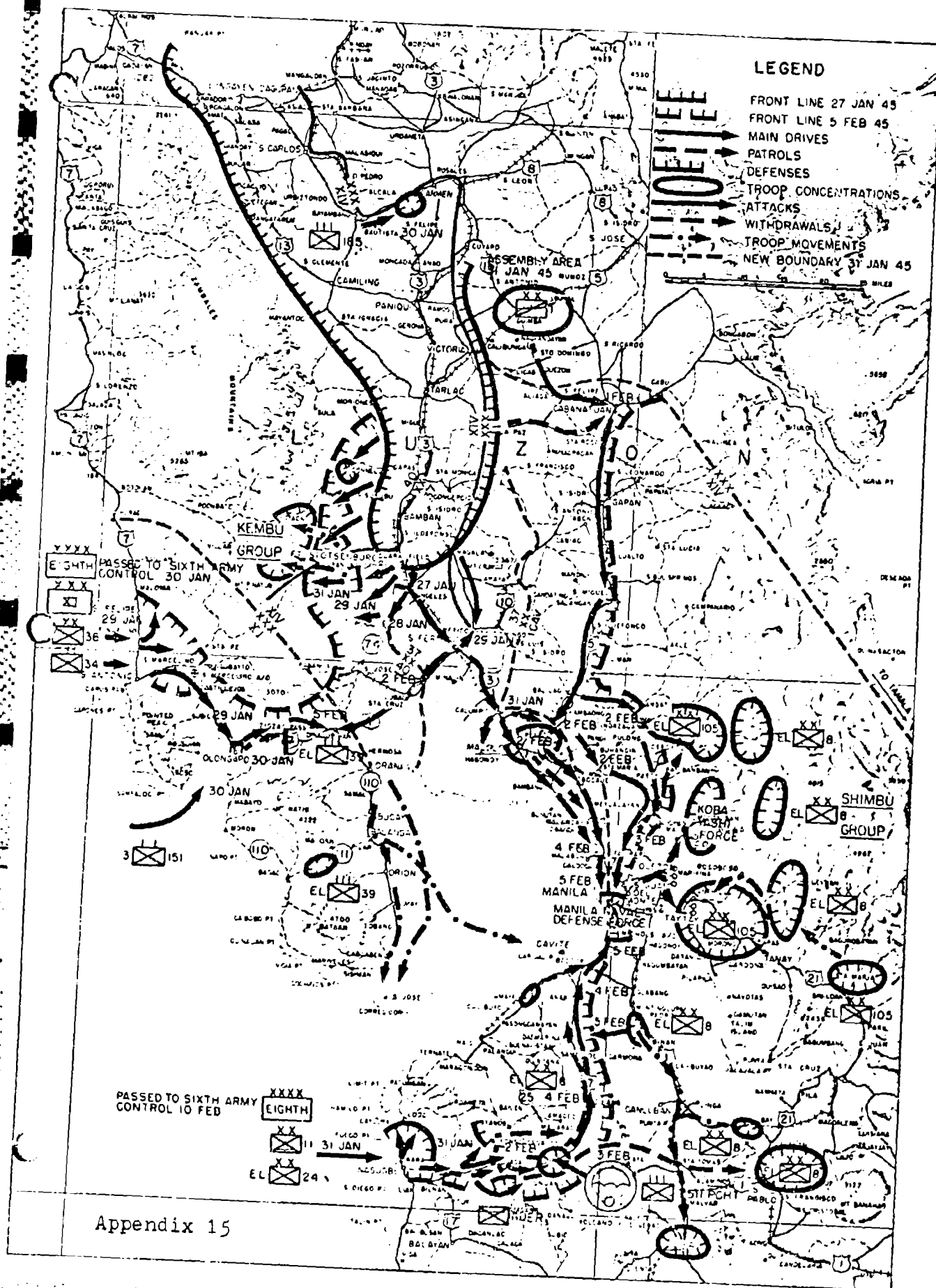
mortar shells - modified for use as mines

artillery shells - modified for use as mines











U.S. LOSSES DURING BATTLE OF MANILA

	KIA	WIA	TOTAL
37th Infantry Division	300	2,700	3,000
1st Cavalry Division	250	1,250	1,500
11th Airborne Division	210	865	1,075
XIV Corps Troops	250	750	1,000
TOTAL	1,010	5,565	6,575

JAPANESE EQUIPMENT CAPTURED IN THE MANILA AREA
(INTACT OR DAMAGED)

ITEMS	QUANTITY
7.7mm, 7.92mm, and 13mm Machine Guns	600
20mm Aircraft Machine Cannon	990
25mm Machine Cannon.	110
37mm Guns.	15
40mm Antiaircraft Guns	15
47mm Antitank Weapons.	5
75mm Field Arty & Antiaircraft Guns	10
76mm 3-inch Naval Guns	15
100mm & 105mm Guns & Howitzers	10
120mm Naval Guns	60
127mm 5-inch Weapons	5
150mm 6-inch Weapons	5
150mm Mortars.	5
200mm Rocket Launchers	5

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